

# The Plough, the Loom, and the Anvil.

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## INTERNAL IMPROVEMENTS.

THE more men work in combination with each other, the greater is their *power* to help themselves. The more they separate from each other, the greater are their *necessities* for looking abroad for aid. Of the truth of this, no one can doubt, for it is in accordance with the daily experience of every man in the nation.

The more they work in combination with each other, the greater is the tendency to exchange at home, and thus to make a market on the land; and the greater is the tendency towards the enrichment of the land and the increase of its products. The more they separate from each other, and the more they render themselves dependent on distant markets, the greater is the tendency towards the exhaustion of the land, and the diminution of its products.

The richer the soil, and the larger its products, the greater is the population it can support, the greater is the consumption of food, and the larger the quantity of manure that can be returned to the land. The poorer the soil, and the less its products, the more scattered must be its population, and the less the quantity of manure that can be returned to the land. The exhaustion of the soil tends to produce poverty among its owners, and the abandonment of the land; diminishing instead of increasing the population, strength, and power of the community. The enrichment of the soil tends to produce wealth among its owners, and the constant increase of the wealth, population, and power of the community; and thus it is that Massachusetts grows richer and stronger every day, while Virginia steadily declines in her position as regards the other States of the Union.

The more men work in combination with each other—the more the loom and the anvil tend to take their places by the side of the plough and the harrow—the more will be the manure returned to the soil and the larger will be the product—the larger will be the quantity of exchanges made upon the spot, and the less will be the *necessity* for making exchanges at a distance—while the greater will be the *power* to go to distant markets, because there will be a constantly increasing tendency towards combining raw materials in the form of cloth, iron, lead, or copper; diminishing the bulk, and increasing the value, and thus facilitating the maintenance of commerce with distant men.

The less men work in combination with each other—the less the tendency of the loom and the anvil to take their places by the side of the plough and the harrow—the less will be the quantity of exchanges made upon the spot, and the greater will be the necessity for making exchanges at a distance—yet with this increasing necessity for going to a distance, there will be found a diminishing tendency towards lessening the bulk of the commodities to be

exchanged, by combining the food and the wool in the form of cloth, and the food and the ore in that of iron, lead, or copper; and the smaller will therefore be the amount of commerce, whether internal or external. The man who transports a ton of lead, transports a value of sixty or seventy dollars; while he who transports a ton of Indian corn from Illinois, transports a value of ten or twelve dollars. England passes all her food through that greatest of all mills, the human stomach, and therefore it is that she is the greatest of all the exporters of food. Illinois refuses to permit her food to pass through that mill, preferring to export it in the most bulky form, instead of permitting it to be condensed into the form of lead, iron, copper, or cloth; and therefore it is that her export of food, and that of her neighbor States, diminishes in quantity and value, notwithstanding their increase of population.

The greater the bulk of the commodities to be exchanged, the greater will be the *necessity* for means of transportation, the greater the cost of transportation, and the smaller will be the returns to the producer. The more compact the commodities to be exchanged, the less will be the *necessity* for transportation, the less its cost, and the larger will be the returns to the producer.

The greater the *necessity* for roads, the smaller will therefore be the *power* to obtain them; and *the less the necessity, the greater will be that power*. If, now, it be desired to see this exhibited in practice, the reader cannot do better than examine the following statement in reference to the increasing density of population in Massachusetts, and the constantly increasing tendency to combination for the purpose of increasing the productiveness of labor, as exemplified in the growth and present condition of their railroad system.

The population of that State was, in 1840, no less than *ninety-four* to the square mile; the total quantity having been 737,699 on a surface of only 7,800 square miles. The census of 1850 exhibits it as having no less than *one hundred and twenty-six* to a mile, the total being 994,499; and as this gives almost one person to every five acres, it is obvious that the *power* of exchanging on the spot must be very great, with corresponding diminution in the *necessity* for going to a distance; and yet we find them in possession of no less than eleven hundred and forty-two miles of railroad, being more than one mile of road for every seven miles of surface, on which were carried in the year, 8,856,656 passengers and 2,219,050 tons of freight; thus proving that increasing power to make exchanges at home was attended by increased power to go abroad to make them; giving in the highest degree the power to choose between the near and the distant market, *in which consists real freedom of trade*.

The population of Ohio was, in 1840, only forty to the square mile, or a total of 1,519,467 on a surface of 39,000 square miles. The space allotted to each individual was therefore almost two and a half times greater than in Massachusetts, affording abundant room for a rapid increase of numbers; and yet the late census exhibits a population of only 1,980,408, or *forty-nine and a half* to a square mile; the ratio of increase having been much less than that of the more densely peopled Massachusetts. Not only, therefore, is there less power to make exchanges at home, but the ratio of the growth of that power is less; and yet we find diminished power to go abroad for the purpose of effecting exchanges. With five times the surface, Ohio has completed but eight lines of road, 672 miles in length, and has in course of construction but about 700 miles; the whole, finished and unfinished, being but little more than that of the small State of Massachusetts.

Why it is so, is easily explained. The people of the latter State have made a market on the land, not only for all their own products, but for a vast quan-

tity of those of other States. They raise the bulky articles required for daily consumption, and bring from abroad those of which the earth yields less, and that will therefore bear carriage to distant markets; and they give to the land the manure yielded by the consumption of all this food; the consequence of which is, that its power to yield return to labor increases with each and every year. The people of Ohio, on the contrary, permit their coal and their ore to remain in the land valueless, while exporting their food in its rudest form, the consequence of which is, that they are steadily exhausting their land, and diminishing the return to labor; and as steadily flying to more distant lands, there to repeat the work of exhaustion. They *must* go to the distant market, for they have no other; *and yet this it is that they call free trade.* The one State brings the loom and the hammer to the side of the food, and the other does not; the result of which is, that while the one obtains increased returns from diminished surfaces and thus increases the *power* to obtain roads, the other obtains diminished return from increased surfaces and thus increases the *necessity* for roads, while diminishing the *power* to obtain them; and therefore it is that we find all the counties, cities, and towns of Ohio engaged in issuing bonds, by aid of which they hope to be enabled to combine their labor and their food for the purpose of obtaining means of intercourse with distant men. Had the policy of the nation favored the development of the internal resources of the State, Ohio would now make her own cloth with which to clothe the laborers who made her roads, and her own iron with which to lay them; and her citizens would not now need to mortgage their property to secure the payment of the vast amount of bonds recently created in the State, to pay for German and Polish wheat in the forms of British cloth and iron.

From month to month we hear of the emigration from Ohio to Wisconsin and Minnesota, while Missouri is, as we are informed, rapidly filling up with emigrants from Kentucky and Tennessee\* and Texas, with those from Mississippi, Alabama, and other of the Southern States. With every such movement there is obviously increasing necessity for roads, which grows as men separate, while it decreases as they come together. The power to make them decreases with separation, and it increases as they approach each other. Separation is a consequence of exhaustion of the land. That exhaustion impoverishes its owner; and thus poverty and need for roads are always found in combination with the almost entire absence of the ability to make them.

The power of combination is a consequence of enriching the land, and through it the land-owner is enriched. It increases as men are enabled to live together; and that they may be so, it is indispensable that the powers of the land be maintained. Men, therefore, become rich as they are enabled to associate; and thus it is that with the diminishing necessity for roads there is a constantly increasing power to make them, as is so fully exemplified in Massachusetts.

To those who have not reflected upon the fact that our farmers are constantly carrying from the land the soil for which they purchased it, or upon the impoverishment that is a necessary consequence of this course of operations, the following extracts from the late Patent Office Report may be useful:

"The fertility of some, particularly in the planting States, is passing rapidly away; in others the progress of exhaustion is so slow as hardly to be observed by the cultivators

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\* EMIGRATION TO MISSOURI.—The wild south-western section of the State of Missouri is rapidly filling up with emigrants, mostly from Kentucky and Tennessee. Within three months past, the population of Lawrence, Newton, and Jasper counties is said to have increased one fourth in number by this means.—*Exchange paper.*



themselves. To keep within the truth, the annual income from the soil may be said to be diminished ten cents an acre, on one hundred million acres, or four-fifths of the whole.

"This loss of income is ten millions of dollars, and equal to sinking a capital of one hundred and sixty-six million six hundred and sixty-six thousand dollars a year, paying six per cent. annual interest. That improved farming lands may justly be regarded as capital and a fair investment when paying six per cent. interest, and perfectly safe, no one will deny. This deterioration is not unavoidable, for thousands of skilful farmers have taken fields, poor in point of natural productiveness, and, instead of diminishing their fertility, have added ten cents an acre to their annual income, over and above all expenses. If this wise and improving system of rotation tillage and husbandry were universally adopted, or applied to the one hundred million acres now being exhausted, it would be equivalent to creating each year an additional capital of one hundred and sixty-six million six hundred and sixty-six thousand dollars, and placing it in permanent real estate, where it would pay six per cent. annual interest. *For all practical purposes, the difference between the two systems is three hundred and thirty-three million three hundred and thirty-three thousand dollars a year, to the country.*"

To some, this estimate may appear large, and yet it but little exceeds the amount expended for manure in England on the land producing potatoes and turnips, and on gardens, as follows:

3,500,000 acres of potatoes, at £7 18s., . . .	£27,650,000
2,000,000 acres of turnips, at £4 10s, . . .	9,000,000
1,600,000 acres of gardens, at £10, . . .	16,000,000
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	£52,650,000
	Or \$252,720,000

The total value of animal manure produced in England is estimated at double this amount, or *five hundred millions of dollars, being far more than five times as much as the wheat crop or the cotton crop of the Union*; and yet, of this most important product of the soil, nearly the whole yielded throughout the country is lost to those upon whose property it is produced, because of the absence of a market on the land for its products.

Dispersion and poverty are the necessary consequences of all this waste; and the more men disperse themselves over the land, the greater must be their distance from market, the greater their necessity for roads by which to go to it, and the less their power to obtain them. From 1842 to 1847, under the tariff of 1842, there was a daily increasing tendency towards bringing the miner and the mechanic to take their natural places by the side of the farmer who produced the food, and the sheep-grazer who produced the wool; and during all that time there was a steady growth in the quantity of the commodities that passed from the food-producing countries of the West towards the East, and a steady increase in the value of commodities obtained in exchange for them, as is shown in the following table, in which is given the quantity of merchandize that passed westward from the Hudson:

Purchased with the crop of 1842, . . .	113,686 tons.
" " " 1843, . . .	135,616 "
" " " 1844, . . .	144,742 "
" " " 1845, . . .	163,125 "
" " " 1846, . . .	215,185 "

The effect of protection to the farmer, in his efforts to bring the consumer to take his place by his side, was shown in the steady increase of his power to purchase iron for the improvement of his machinery of production, the consumption of which rose in this short period from 300,000 tons to 950,000 tons. The necessary consequence of this was, that the Western States were gradually recovering from their difficulties. Their coal and ore beds, and their vast



deposits of lead, were becoming daily more and more productive, and it needed but a few years' continuation of the same system to enable them to combine their own labor, their own food, and their own ore, for the purpose of making roads for themselves. Unfortunately, however, they were persuaded that it would be for their interest to adopt measures that it was well known would close the mills and the furnaces, the coal and the lead mines of the Union, and thus diminish the power of association at home; and what are now the consequences? Instead of feeding the whole people of Europe; instead of witnessing the export of food to England growing from almost thirty to three hundred millions, as was promised by Mr. Walker, we see it sinking in amount from year to year. What has been the tendency of things at home, will be seen by the following comparison of the receipts of food at New-Orleans in 1848-49, and 1850-51:

	1848-9.	1850-1.
Bacon, packages, . . . . .	84,048	103,248
Pork, " . . . . .	587,421	288,295
Lard, " . . . . .	489,847	267,501
Beef, " . . . . .	70,590	49,066
Corn, sacks, . . . . .	1,706,312	1,298,992
Cheese, boxes, . . . . .	54,287	78,894
Flour, barrels, . . . . .	1,013,177	941,066

That the great diminution here observed is not compensated elsewhere, will be seen on an examination of the following table of receipts on all the canals of New-York for the year just closed, as compared with those of 1849:

	1849.	1851.
Pork, packages, . . . . .	73,895	45,013
Beef, " . . . . .	105,492	77,798
Corn, sacks, . . . . .	5,120,270	7,670,345
Cheese, pounds, . . . . .	42,097,818	25,598,945
Flour, barrels, . . . . .	3,263,087	3,358,485
Wheat, bushels, . . . . .	2,734,380	3,163,482
Butter, pounds, . . . . .	20,880,409	9,564,268
Wool, " . . . . .	12,731,403	10,517,408

Although the population of the West must in this period have grown from twelve to fifteen per cent., the quantity of commodities sent to market has diminished; and yet the price of wheat and flour has fallen so low, that the farmers are everywhere storing it, and paying heavy interest for loans to enable them to do so; and the reason why it has fallen is, that, after having crushed the domestic market, the foreign one has failed them; the total export of food to Europe having in the last fiscal year fallen to the pitiful sum of *eight millions of dollars*, with a prospect that it will this year be even less, as is shown in the following

*Statement of the Shipments of Flour, Meal, and Grain, from the United States to Great Britain and Ireland, from the 1st of September last, to the latest dates:*

From	Flour, bbls.	C. Meal, bbls.	Wheat, bush.	Corn, bush.
New-York, . . . . .	292,756	....	767,738	232,171
New-Orleans, . . . . .	5,851	....	....	23,719
Philadelphia, . . . . .	33,590	1,680	66,059	1,500
Baltimore, . . . . .	17,723	....	71,232	....
Boston, . . . . .	10,136	....	....	....
Other ports, . . . . .	5,100	....	22,000	18,077
Total, . . . . .	365,156	1,680	927,029	275,467
About the same time last year, . . . . .	585,800	2,736	766,832	219,799

The tendency of the existing revenue system is that of producing a constantly increasing necessity for distant trade, with constantly diminishing power to trade; because it looks to the separation of the consumer from the producer, thus increasing the burden of transportation to be borne by the planters and farmers of the Union. Borne down by this weight, and unable to help themselves, we see the people of the West perpetually applying to Congress for appropriations for the improvement of rivers and harbors, and humbly soliciting, and generally in vain,\* foreign banks and bankers—the Rothschilds and the Barings—for loans, by aid of which to purchase the food and the clothing required by the men whom they would employ to make their roads, and the iron with which to lay them. Their necessities are great, and their powers are small; and yet are they daily increasing the former and diminishing the latter, by scattering themselves still more widely throughout the West, and wasting annually on the road and in distant markets an amount of manure that, if applied upon their lands, would enable them both to improve their rivers and make their roads. The annual loss from this waste is equal to the whole cost of at least fifteen hundred miles of railroad; and in the last ten years it has been equal to that of fifteen if not twenty thousand miles.

For years past, Congress has refused all appropriations for works of internal improvement, and so is it likely to do while the people of Ohio and Indiana shall continue to increase their necessities by pressing still farther westward to seek new lands to be again exhausted; and such will be the case, because those communities will continue poor. Every man that leaves Ohio, Kentucky, Tennessee, Indiana or Illinois, diminishes the power of those States to help themselves. The General Government grants land to Illinois, Iowa, and Missouri, to enable them to attract the people of Ohio and Indiana; but it refuses to permit the people of these latter States to offer inducements to others to come and live among them, eating their food while converting ore and coal into iron. If they desire to become rich and strong, and to make themselves heard, it is needed only that they should pursue that course which would give value to their inexhaustible beds of coal and iron ore, and to the lead and copper mines of the States still farther west; by doing which they would be enabled to export their food in the compact form of lead, and iron, and copper, instead of the bulky one of corn.

Quite recently, Illinois has obtained a large grant of land to enable it to make a road; but Iowa is following the example, and Missouri desires a grant for a road that is to be extended to the Pacific, and that is to aid in carrying off the people of Ohio, Indiana and Illinois, and in lessening the power of those who are left behind. Every where the States of the West are seen, as they were in 1836, endeavoring to borrow money with which to make their roads; but Illinois has failed, although her grant amounted to 2,500,000 acres of land, perhaps as rich as any in the world. The reason for this is simple. She is destroying the

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\* We have seen letters by the last English steamer, to the purport that little or nothing can be done in the negotiation of large parcels or entire issues of American railroad bonds, in Paris or London. Unsuccessful attempts have been made in both cities, with some of the best-secured loans of the New-York short roads, and no encouragement was held out for large operations. In Paris, the feeling was adverse to every thing except French *Rentes*; yet it is quite certain a regular retail absorption is daily going on in New-York, of all the best descriptions of bonds, for French as well as Swiss, German, and Belgian account. This, however, bears no proportion to the vast issue of these securities, and little or no money really passes to the country. It is but part of the consideration paid for continental goods, a substitute for exchange when the rates rule high, to which our foreign friends are tempted by the large interest which these bonds pay, when bought at or below par.—*New-York Daily Times*.

domestic market for her products, and the foreign one diminishes; the consequence of which is a diminution in the value of her land, when there might be—and under other circumstances there would be—a large increase. Her export of food in the form of lead has fallen from 800,000 pigs to 325,000, when it should have risen to a million and a half; and had it so risen, she would now be enabled to make roads for herself, without depending upon the caprice of foreign bankers. "Help yourself, and Hercules will help you," is a saying that should be borne in mind by the farmers and planters of the Union. Let them determine to make themselves independent, by bringing into activity the vast bodies of mineral wealth by which they are every where surrounded; let them bring the loom, the spindle and the hammer to their sides; let them thus create a market among themselves, and they will find no difficulty in obtaining all the aid they need desire to enable them to reach the most distant markets of the world.

So, too, will it be with the great copper producing region. Already it furnishes a market for vast quantities of produce that otherwise would go to swell the surplus for a market for which we are now, by aid of the tariff of 1846, rendered dependent upon *the steadily diminishing market of Britain*. What is the condition of the trade with that region, and what are its wants, may be seen by the following article from the *Lake Superior Journal*:—

"It appears that, in 1845, the copper shipped thence amounted to but twenty-three tons. In 1850, it had been swelled to more than thirteen hundred tons; and the estimates of parties on the spot lead to the belief that, during the next season, the yield will be more than doubled. We are without any statement of the population, but, though sparsely settled, it must be considerable in the aggregate, judging from the circumstance that, in the course of the present year, the quantity of flour imported for consumption was not less than 100,000 barrels, or about 12,000 tons; and this is understood to be utterly insufficient to sustain the resident population throughout their long and rigorous winters.

"The *Journal* notices reports to the effect that in some districts absolute famine has already commenced, and the statement is confirmed by information that has appeared in several of our Wisconsin exchanges.

"The means by which this trade is carried on are difficult to a degree almost beyond conception. For these difficulties there is but one remedy, and that is the construction of a canal at the Sault Ste. Marie, connecting the waters of Lake Superior with those lower in the chain, and of sufficient capacity to admit the passage of the largest vessels engaged in the trade of the Northern lakes. The length of it would not be more than a mile; and the cost of the whole work is estimated by competent authorities at less than half a million of dollars. Argument is not needed to prove that such an expenditure would immediately produce results of the highest importance to the locality and to the country generally."

Here is a market for food, capable of almost indefinite extension, and, that it may be so extended, it is needed only that the farmers of the West should determine to protect themselves in their efforts to bring among them the men who will eat their corn while mining their lead and their copper. That done, they would have no difficulty in making their canal themselves. We should then cease to hear of famine on Lake Superior, while the farmers on Lakes Huron and Michigan were being ruined for want of a market for their corn and their wheat. We beg of them to reflect that—**THE FIRST OF ALL THE TAXES TO BE PAID BY COMMODITIES IS TRANSPORTATION.** The corn that is worth sixty cents in New-York is worth but twelve and a half cents in some parts of Tennessee. Let the price in the former sink to forty cents, and the Tennessee farmer will waste it rather than send it to market, for it will not pay the cost of transportation. Let that cost be reduced to thirty cents, and the corn will still be worth ten cents, although it should continue to be worth but forty in New-York. Bring the market nearer, so as to reduce the trans-



portation to twenty cents, and the price in Tennessee will rise to twenty. Bring the market to the spot ; make a market on the land for all the products of the land, and the price in Tennessee will be as high as in New-York.

The planter rejoices in low freights, because all that is thus saved is added to the value of his cotton. He knows that *he it is that must pay the cost of transportation*, and that that is the tax which, high or low, *must* be paid before he can have any thing for himself.

The commodities of which the earth yields by tons, such as potatoes, onions, carrots, turnips, and hay, will not bear transportation. They must be eaten on the ground or near it. Make a market on the ground for all the bulky commodities that can be raised, and the very fact of their bulk constitutes a large bonus to the farmer. They cannot be brought from a distance except at heavy cost of transportation, and the price will be high because of the little power of interference from abroad. An acre of land will yield four hundred *bushels* of potatoes, or even six hundred *bushels* of turnips, whereas it is good land that yields four hundred *pounds* of cotton, or twenty bushels of wheat to the acre. It will now not be difficult to see how it is that the British system of policy operates as a "great discouragement to agriculture" in all those countries subject to it ; nor why ADAM SMITH so strongly urged upon his countrymen that, in preventing the artisan from going to the food, they were guilty of "a manifest violation of the most sacred rights of mankind." So long as Great Britain shall continue to be "the work-shop of the world"—so long as she shall continue to maintain the monopoly of machinery for the production of iron, and for the conversion of wool into cloth—so long must the farmers of the world continue to raise those commodities of which the earth yields but little, as wheat and cotton, when they might raise potatoes, and turnips, and hay, could they make a market on the land for its products.

The farmer who cannot sell his corn converts it into pork, for the purpose of relieving himself from the payment of this enormous tax of transportation, that he knows *he must pay before any thing can come to himself*. The man who is to consume his product is at a distance so great, that as corn it cannot travel, but as pork it may be carried, and leave something to repay him for his cost of labor. Could he but be induced to recollect that the consuming man would demand of him five times as much food, if brought to his side, there to be employed in converting his wool into cloth, and that he would gladly come, if invited and made sure of employment, he would see that, by pursuing such a course, he would relieve himself from the payment of a tax so enormous that, if even one tenth of the amount were claimed by the government, he would be ripe for rebellion.

The farmer who has a market at hand for his milk, buys his butter and his cheese, because those commodities are brought to market by persons who live at a distance, and must pay the tax of transportation. He knows that, *as milk*, the produce of his dairy will yield him three times as much as it will do in the form of cheese.

The farmer is surrounded with lands covered with timber. He commenced the work of cultivation on the lighter lands that were more easily cleared and drained. Could he have a market for his timber, he could clear and drain his better lands. The cost of transportation is, however, too great ; and, as he cannot sell his trees, he is compelled to let them stand, for the labor of clearing would be more than the land would exchange for when cleared. Place the mill or furnace in his neighborhood, and make a demand for houses, and he could sell his timber, and thus clear his land. We see thus that, if we would increase the amount of trade, we must enable the farmer to raise potatoes and turnips

instead of wheat, and also enable him to sell his timber and clear his better land. That he may do this, he must be relieved from the first and heaviest of all taxes, that of the transportation of his commodities to market. Concentration does this for him, and therefore it was that ADAM SMITH was enabled to see how vast was the advantage to the farmer from having the artisan take his place by his side. Dispersion produces the opposite effect. It diminishes the power to produce commodities in which to trade, by compelling the farmer to raise bushels of wheat when he might have tons of potatoes. It diminishes that power by compelling him to continue to cultivate poor soils when he might have rich ones. His timber rots on the ground, when he might sell it, had he a market at hand. *His power to trade is thus diminished by the system which is called free trade.*

The farmer who has a market at hand carries his hay, his oats, or his wheat to market, and brings back a load of manure, by aid of which he improves his land. He who is at a distance from market cannot obtain manure, because of the enormous tax imposed upon him by its transportation, and the consequence is, that his labors become from year to year less productive, as his land becomes more and more exhausted. He begins with twenty bushels to the acre, and, instead of going up to forty, he falls to ten, which is more than is now the average of all the wheat land of the fertile State of Ohio. The next step is to run away himself to seek other land, and thus it is that we diminish instead of increasing the power of association, while increasing the necessity for it.

Every where throughout the world, the productiveness of agriculture increases as the consumer and producer come nearer together; and every where its productiveness diminishes as they separate. It is assuredly time that our farmers and planters should at least begin to see that they it is that need protection; that they it is that need to have the market brought near to them, and thus enable themselves to save not only the transportation of their products, but also to return to the soil the manure yielded by those products; and that the more effectually this policy is carried out, the larger will be the quantity of their crops, and the larger the prices at which each and every portion of those crops will sell. The power of man, whether for the production of food and clothing, the making of roads, or the establishment of schools, grows every where with the increasing productiveness of the land, because men are thereby more and more enabled to work in combination with each other. It diminishes every where with the diminishing productiveness of the land, because men are more and more compelled to fly from each other.

#### THE APPLICATION OF SALT AS A MANURE.

THERE have been various experiments made with salt as a manure for potatoes. The editor of the "Farmers' Encyclopædia," in 1817, on a gravelly soil, at Great Totham, in Essex, England, made the following trials:

	Bushels.
1. Soil simple, produce per acre - - - - -	120
2. Soil with 20 bushels of salt in September, - - -	192
3. Soil with stable-manure, 20 loads in the spring of the year, -	219
4. Soil with 20 loads of manure and 20 bushels of salt, -	234
5. Soil with 40 bushels of salt alone, - - - - -	192
6. Soil with 40 bushels of salt and 20 loads of manure, -	244

The Rev. Edmund Cartwright, of Hollenden House, in Kent, made various important trials of salt as a manure for potatoes. The soil on which the experiments were made consisted of three fourths sand.

"Of ten different manures," said this agriculturist, "salt, a manure hitherto

of an ambiguous character, is (one only excepted) superior to them all. The effect of the mixture of salt and soot is remarkable." The writer of this witnessed the same result on carrots, at the rate of 16 bushels each per acre.

With regard to the destruction of vermin by means of salt, we may safely assert that there is, perhaps, no agricultural use of common salt more undoubted. The effect, too, is direct, and the result immediately apparent. For this purpose, from 5 to 10 bushels per acre are sufficient. The agriculturist need be under no apprehension that the salt will destroy his crop, for 15 or 20 bushels of salt per acre may be applied to young wheat with safety.

Salt has been employed by the gardener for many purposes; most commonly on lawns, at the rate of ten bushels per acre. The following experiments were made by Mr. George Johnson, at Great Totham, and are the more readily given a place here, from the care with which they were made:

The soil was composed of—										Parts.
Stones and gravel,	-	-	-	-	-	-	-	-	-	27
Vegetable fibre,	-	-	-	-	-	-	-	-	-	1.5
Soluble matter,	-	-	-	-	-	-	-	-	-	3
Carbonates of lime and magnesia,	-	-	-	-	-	-	-	-	-	18
Oxide of iron,	-	-	-	-	-	-	-	-	-	4
Animal and vegetable matter	-	-	-	-	-	-	-	-	-	1
Alumina,	-	-	-	-	-	-	-	-	-	4.5
Silica,	-	-	-	-	-	-	-	-	-	40
Loss,	-	-	-	-	-	-	-	-	-	1

100

Produce  
per acre.*Sown with Windsor Beans,*

Soil treated with 20 bushels of salt per acre, bushels,	-	-	-	-	-	-	-	-	-	217
Soil simple,	-	-	-	-	-	-	-	-	-	135

*With Onions,*

	Tons.	cwt.	qrs.	lbs.
Salt, 20 bushels, manure 20 tons per acre,	-	3	12	3 12
Manure,	-	2	10	2 19

*With Carrots,*

1. Soil without any manure,	-	-	-	-	13	4	0	0
2. Soil with 20 tons of manure,	-	-	-	-	22	18	0	26
3. Soil with 20 bushels of salt,	-	-	-	-	18	2	0	0
4. Soil with 20 bushels of salt, and 20 tons of manure,	-	-	-	-	23	6	1	18

*With Parsneps,*

1. Soil with 20 tons of manure, and 20 bush- els of salt,	-	-	-	-	-	6	15	0	0
2. Soil with 20 tons of manure,	-	-	-	-	-	6	11	1	1

*With Early Potatoes,*

1. Soil simple,	-	-	-	-	-	-	-	-	308
2. Soil with 20 bushels of salt,	-	-	-	-	-	-	-	-	584

*With Beets,*

1. Soil simple,	-	-	-	-	-	-	4	10	1
2. Soil with 20 bushels of salt,	-	-	-	-	-	-	4	8	3
3. Soil with 20 tons of salt and 20 tons of manure,	-	-	-	-	-	-	8	0	0
4. Soil with 20 tons of manure,	-	-	-	-	-	-	6	10	0

In preventing clubbing in the roots of some of the brassica tribe, Mr.



Johnson found salt highly useful; he states, in some observations on this disease, read to the Horticultural Society of London: "Some cauliflowers were planted upon a light silicious soil, which had previously been manured with well-putrefied stable-manure, and over one third of the allotted space was sown salt, at the rate of 20 bushels per acre, immediately before planting in July. The previous crop had been broccoli. Fifty-four plants were set on the two thirds unsalted, and 26 on the one third salted; the result has been, that of the 54 unsalted, 15 have been diseased and unproductive, but of the 26 salted, only 2."

There is little doubt but that salt might be much more extensively employed by florists than at present. A very small quantity of salt added to the water in which flowers are placed, adds considerably to their duration. There are many bulbous-rooted flowers which flourish best in the immediate vicinity of the sea. Mr. Edwin Greville remarked, in 1824, that some common salt applied at the rate of 16 bushels per acre to a portion of a bed of stocks, in his garden at Wyaston, in Derbyshire, made them grow most decidedly stronger and finer, and bloom much more perfectly than those growing in the same bed unsalted. It is a common custom with the importers of exotic plants to dip cuttings in salt water. Before the adoption of this plan, they almost invariably perished in the passage.

Christopher Packe, who in 1688 published in English Glauber's folio volume, dwells at considerable length in his preface upon the mixture of salt and lime: "for the enriching of poor and barren land, it is the cheapest of all mixtures, and is most easy to be done; for any ploughman having but once seen it done, may be presently able to manage it."

Salt and lime was used as a manure by Mr. Mitchell, of Ayr, many years since; and he, not knowing what others had done with this fertilizer before his time, considered himself to be the discoverer. He thus describes his process:

Take 32 bushels of lime, and slack it with sea-water previously boiled to the saturated state. This quantity is sufficient for an acre of ground, and may be either thrown out of the carts with a shovel over the land in the above state, or made into a compost with 40 loads of moss or earth, in which state it will be found to pay fully for the additional labor, and is sufficient for an acre of fallow ground, though ever so reduced before. Its component parts are muriate and sulphate of lime, mineral alkali, in an uncombined state, also muriate and carbonate of soda. All the experiments have done well with it, but especially wheat and beans; and it has not been behind any manure with which it has been compared. There is one instance in which it was tried in comparison with 72 cart-loads of soaper's waste and dung; and although this was an extraordinary dressing, yet that with this salt and lime manure was fully above the average of the field.

Mr. Mitchell calculates that 3000 gallons of sea-water, boiled down to about 600 gallons, will slack 64 bushels of shell lime, (these 3000 gallons of sea-water will contain about 700 lbs. of common salt,) a quantity sufficient for 2 acres. The expense of carrying the water from the sea, the evaporation, &c., he adds, will cost 20s. The 64 bushels of limestone cost him 40s., or 3*l.* for 2 acres.

The use of this mixture of salt and lime was also noticed in the year 1800, by Mr. Hollingshead, of Chorley, in Lancashire, who observes: "Lime prepared for manure should be slacked with salt-springs or salt water: lime so slacked will have a double effect." And in 1816, Mr. James Manley, of Anderton, in Cheshire, when giving his evidence before a committee of the House of Commons on the salt duties, mentioned that in getting marl (which

is a mixture of carbonate of lime, alumina, and silica,) he had found that by mixing it with brine instead of water, the portion of the field on which the brined marl was used, yielded 5 bushels of wheat per acre more than that portion on which the watered marl was employed; and it may be well to remember that the celebrated salt sand of Padstow Harbor is composed of 64 per cent. of carbonate of lime; and that in the experiments of the late Rev. Edmund Cartwright, upon potatoes, of 25 manures, or mixtures of manures, salt and lime were found superior in their product of potatoes to 19 others.

Every farmer has it in his power, even in the most inland situations, to procure this most excellent manure for the use of his farm, by means of a mixture of two parts of lime and one part of common salt, and suffering it to remain incorporated in a shady place, or covered with sods, for two or three months; a plan which I suggested some years since. (*Essay on Salt*, p. 32, 3d ed.)

By this process a gradual decomposition takes place, muriate of lime and soda are formed, the whole mass speedily becoming encrusted with alkali. There is another advantage to be derived from the adoption of this process, besides the formation of soda, viz., that the muriate of lime is one of the most deliquescent or moisture-absorbing substances with which we are acquainted; and in consequence, whenever it exists in a soil, the warmth of the sun has, in summer, much less influence on it than it would otherwise have.

Johnson remarks: "I would especially warn those who try the effect of a mixture of salt and lime, to attend carefully to the directions I have given, and not, as some farmers have done, to use the mixed salt and lime immediately before any decomposition has taken place. After it has been well mixed together in a dry state, it should be allowed to remain two or three months undisturbed, and then applied at the rate of from 35 to 60 bushels per acre, either by sowing it out of a seed-basket, or mixed with earth, and spread in the usual way. It is necessary to give the mixture time, since the decomposition proceeds very slowly, and is not to be hastened by any simple process."

"The mixture of salt with soot produces the most remarkable effects, especially when trenched into ground prepared for carrots. Mr. G. Sinclair found that when the soil, unmanured, produced 23 tons of carrots per acre, the same soil, fertilized with a mixture of only  $6\frac{1}{2}$  bushels of salt, and  $6\frac{1}{2}$  of soot, yielded 40 tons per acre. Mr. Belfield describes the mixture as equally beneficial for wheat. And Mr. Cartwright found that when the soil, without any addition, yielded per acre 157 bushels of potatoes, dressing the same land with a mixture of 30 bushels of soot and 8 bushels of salt, made it produce per acre 240 bushels."

We trust our readers will try experiments for themselves; as the use of salt as a manure has been so long known, and its effects so fully tested in England, that we have no doubt of its great utility as a fertilizer. It has, in our own experience, proved a most valuable auxiliary to the farmer, and we can name others who have tried it with the most happy results. Will some of our readers give us the result of their own practice in its use as a fertilizer?

#### MINERAL WEALTH OF THE CAROLINAS.

RECENT discoveries in Moore county, says the *Fayetteville* (N. C.) *Observer*, confirm the confident prediction made by Professor Johnson, over two years ago, that the whole of the country to the Montgomery line would be found to be a bed of coal.

South Carolina abounds in lime and iron ore, and North Carolina abounds in the fuel with which to smelt the ore, and in the labor that would, if so

applied, enable them to export instead of importing iron ; but they waste the labor, and permit the fuel, the ore, and the limestone to remain in the land, useless to all, and then they issue bonds for the purchase of iron ; and thus it is, according to *British* free traders, that the land-owners of the Carolinas are to be made rich. Every day brings with it new discoveries of fuel and of iron ore, and yet every day witnesses a diminution of the power either to produce or to consume iron, because of the existence of a policy that tends to secure to England a monopoly of the supply of the world with cloth and iron.

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CHINESE HUSBANDRY AND POLICY.

IN arranging the various classes of the people, [says the *Farmer and Mechanic*,] the Chinese place the literati in the foremost rank, as learning is with them the stepping-stone to honor ; but immediately after the learned, the husbandman takes the precedence of all others, because, being engaged in raising the necessaries of life, he is abundantly more important than the mechanic, who merely changes the form of matter, and the merchant, who originates nothing, and only barter and exchanges commodities for the sake of gain. This honor put upon agricultural employments is evidently the result of design, and shows that the country, being overstocked with inhabitants, needs cultivating to its utmost extent, in order to provide the people with sustenance. The industry and skill of the Chinese, striving to produce as many of the necessaries of life as possible, argues a dense population ever struggling against threatening want, and compelled to exert themselves for their daily bread. In tropical climates, where the ground is fertile and the population scanty, the natives find that by a few months' labor they can produce sufficient food for a whole year's consumption, and are therefore indisposed to exert themselves further ; but in China the inhabitants are incessantly employed, and every individual is obliged to be busy in contributing his quota to the common weal. Every one, in the least acquainted with the manners of the Chinese, knows that they are untiring in their exertions to maintain themselves and families. In the business of agriculture they are particularly active, raising two crops from the ground every year, extending their cultivation in every possible direction, and bringing the most barren and unpromising spots into use, in order that nothing may be lost. Their skill in effecting these objects is not, considering their few advantages, contemptible. They thoroughly understand the importance of varying the crops ; they know perfectly well the seasons and soils adapted for certain productions ; and they are fully sensible of the importance of manuring the ground, in order to maintain its fertility. A stranger is struck with this on first setting his foot on the shores of China. Almost every individual met with in the paths and fields, is provided with a basket and rake ; and every evening the cottager brings home a certain quantity to add to the dung-heap, which is a most important appendage to every dwelling. Having but few sheep and cattle, they are obliged to make the most of the stercoraceous stock of men and swine. This is carefully collected, and actually sold at so much per pound ; while whole strings of city scavengers may be seen cheerily posting into the country every successive morning with their envied acquisitions, little heeding the olfactory nerves of the less interested passengers. Every other substance likely to answer the end is anxiously collected, and carefully disposed so as to provide for future exigences ; such as decayed animal and vegetable matter, the sweepings of streets, the mud of canals, the short, stumpy human hair, shaven from millions of heads every ten days, is



industriously gathered up, and sold for manure throughout the empire. Of the high importance of stercoration in China, we see an illustration in that passage in 2 Kings vi. 25, when there was a great famine in Samaria. In the art of manuring, the Chinese may give a lesson or hint to our agriculturists; while in placing husbandry in the *highest* estimation, and the cultivator of the soil in the *second* rank in the empire, they display a liberality and true enlightenment that throws the American public deplorably in the shade.

#### MAYNARD'S PRIMER.

FROM our connection with the *American Turf Register*, we flatter ourselves that our hearty endorsement of the following article from the *Springfield* (Mass.) *Republican*, will not be without weight with our readers, a majority of whom seek relaxation from the ordinary occupations of the farm and the plantation, in the exciting and invigorating sports of the field.

The paragraph here quoted refers chiefly to the pistol; but it is the application of Mr. Maynard's ingenious invention to the shot-gun and hunting-rifle, that challenges our admiration. The advantages are many and obvious. The fingering and placing the cap on the nipple—at all times an awkward, and, when the fingers are benumbed with cold, actually a difficult process—is entirely dispensed with, and all danger from accidental discharges and flying caps avoided. Nor does the primer perceptibly increase the bulk of the lock; for though it contains fifty percussion pills, it does not occupy a space larger than a Mexican dollar. Neither is the sportsman liable to those petty annoyances sure to occur at the most critical moment, such as the falling off of a cap, or the stoppage of a tube. But we might fill pages in detailing all the advantages of the new invention. Suffice it to say, we have tried it, and unhesitatingly pronounce it as great an improvement on the percussion-cap, as was the cap on the flint.

Apropos of guns and shooting, we wish to say, that as the "Sporting Olio" of the old *American Farmer* was one of the most popular features of that work, we have it in contemplation to offer in future something similar in the pages of *The Plough, the Loom, and the Anvil*.

#### MAYNARD'S PRIMER—NEW REVOLVER—THE MASSACHUSETTS ARMS COMPANY.

The famous new primer, the invention of Dr. Maynard, is already known to our readers by description. It forms another of those steps in advance of all the rest of the world, which have peculiarly distinguished the improvements, in this country, in the manufacture of arms and the art of gunnery. It would take but a brief examination of it to see that it must supersede percussion-caps, as caps superseded flints; and what a slight examination makes so apparent, actual and rigid experiment seems to have established. Colonel Craig, the Chief of the Ordnance Bureau, has reported at length to General Scott upon its advantages and superiority, and recommends its early and extensive introduction into the army. General Scott has approved the report, and it is understood that preparations have already been made to equip all the cavalry with arms furnished with this primer. It has, of course, secured this position only by its merits, and after having passed through the most rigid forms of trial to which the Ordnance Department could subject it.

The Massachusetts Arms Company of Chicopee, having purchased the right to manufacture this primer, and apply it to use in the manufacture of arms,

have succeeded in the project of a new revolver, which we cannot believe to be otherwise than very far in advance of any and every other revolver ever made. Colt's revolver is always, and very properly, referred to as the standard by which to judge of improvements here; but we have no hesitation in pronouncing the new arm to be very far its superior. Its advantages are so obvious, that a mere glance at it convinces the examiner that it must supersede its predecessors, as they have superseded the ruder and less ingeniously adapted contrivances of earlier days.

To those who have forgotten the description of the new primer, it will be proper to state that it consists of a line of fulminating pills, placed equidistant upon a strip of water-proof paper. These pills, or deposits of fulminating powder, thus ranged upon a narrow strip of paper, can of course be coiled up in a receptacle within the lock, and by proper apparatus be pushed forward in succession to receive percussion upon the nipple of the chamber or barrel.

The first and prominent advantage which the new revolver has over that so widely known as Colt's, is in the employment of Maynard's primer, and the other apparent advantages are those which grow mainly out of the simplifications which the primer allows. It can be discharged much faster than Colt's. To prove this, it is only necessary to say that it is adapted to a supply of thirty-six primers at once. In Colt's pistol, in order to make thirty-six discharges, the fingers must fix, separately, thirty-six caps; a very slow business, particularly if one is in a hurry. Add to this that the flying of the copper, the "fouling" of the lock, the loosening and dropping off of caps, as well as their corrosion and the moistening of the powder, are all entirely obviated in the new arm, and, so far, its advantage is very apparent. It has other advantages, and among them it appears to us that the doing away of the nipples attached to each chamber of Colt's pistol is an important one. It uses but one nipple, and this is stationary. There is hardly a possibility that more than one chamber can be discharged at once, and its accidental discharge in the pocket would seem to be an absolute impossibility. The method of revolving the cylinder is novel, and has an advantage over those hitherto used.

The construction of the new revolver is the most compact and symmetrical of any we have ever seen, and we certainly do not perceive why it will not crowd all other revolvers out of market when it shall come to be introduced. We understand that the Company are preparing to enter largely into the manufacture of these revolvers, and that they have also engaged in the manufacture of locks for sporting and common guns, they having the exclusive right to Maynard's primer for this purpose. We are glad that improvements of so marked a character as these are in hands so efficient.

#### HOW THE TARIFF OF 1846 AFFECTS THE MERCHANTS.

Accounts from the South, East, North, and West, all concur in the fact that these several sections are each suffering under a stringent money market, and interior jobbers are not fond of increasing liabilities, while doubts and uncertainty hang over the results of their collections for goods already trusted out.—*New-York Dry Goods Reporter*.

The tariff of 1846 was to increase trade, and thus benefit the merchants. That of 1842 was to diminish trade, and thus injure the merchants. So at least said the advocates of *British* freedom of trade—of that system which looks, and has always looked, to the maintenance of the British monopoly of the machinery for converting the food and the wool of the world into cloth, and the food and the ore of the world into iron. What, however, have been the

results of the two systems? Under the tariff of 1842, the consumption of iron and of coal trebled in quantity, and that of cotton and wool doubled; and there were then no "doubts" or "uncertainty" hanging over "the results of collections," nor was there any necessity for diminishing trade, because men were every where growing rich, and improving their machinery of production, and becoming from year to year better able to pay for all they purchased; while States were not only paying the interest of their debts, but the necessity for creating foreign debt had ceased. Under the tariff of 1846, the consumption of iron, and of cotton and woolen cloth, rapidly diminishes; and with the diminution in the consumption of iron, the power of production diminishes, and "doubt and uncertainty" are every where, rendering it certain that, great as has already been the reduction of trade, it is destined to be still further diminished. Great trade and freedom of trade go together. Trade grew under the tariff of 1842, because under it the power of association grew, and every act of association is an act of trade. Trade diminishes under the tariff of 1846, because it tends to destroy the power of association, without which commerce cannot flourish. The chief trade of the present time is that of issuing bonds to be applied to the purchase of the cloth and the iron that, under the tariff of 1842, we made at home.

#### IMPROVEMENT OF OUR COMMON STOCK.

THERE is perhaps no one branch of agriculture which more needs improvement, or which would become productive of greater profit to the agriculturist, than that of neat cattle; and it is gratifying to observe some little interest awakening in the minds of farmers generally, to this important branch of their profession. Improvement has been confined too much to the more wealthy; and the man who has been the most liberal in his expenditures to benefit the country in this particular, has not unfrequently met with the ridicule of his neighbors. But happily for such—more particularly for the country—public opinion is undergoing a change, and those who once opposed improvement, are now in some degree availing themselves of its benefits.

That our improved breeds are greatly superior to the common stock of the country, I presume no one will deny. This being conceded, it becomes a matter of no little importance to ascertain in what manner we can the most speedily avail ourselves of the means within our possession for the improvement of our common stock. It is evident that we should seek a cross with some of the improved breeds, the relative merits of either of which I do not propose here to discuss. Every individual, before making choice of any particular breed, should carefully examine the subject, take into consideration his locality, and, more particularly, should *consult his own taste*; for unless fully convinced in his own mind that some particular breed is *the best*, he will probably make but slow advancement. Having made choice of the breed, it is evident that he should then seek to engraft its characteristics and good qualities upon his own stock. And here allow me to say that the farmer not unfrequently makes a great mistake. He procures perhaps a few half-bred heifers, and a male animal of the same grade, and commences breeding. Where is the chance for improvement in this selection? It is true that he may select from year to year his best animals, and thus advance slowly; yet the *grade* remains the same; or perhaps (which is more frequently the case) he procures nothing but a half-bred male animal, and with this intends to make great improvement. The first cross by this animal from our common



cows would be but one fourth; this produces again, in like manner, one eighth, and the next only one sixteenth of the blood of the pure-bred animal, and so on, deteriorating in the same proportion with each successive generation. It is perfectly plain that he has taken a wrong view of the subject, and that his improvement (?) will soon end where he commenced. The most speedy and successful improvement, therefore, can only be obtained by the selection and use of a *thorough-bred* or pure-blooded male animal.

For illustration of this, we will suppose the breed made choice of to be the short-horn or Durham. The produce from the first cross between a thorough-bred animal and our common cows, would be one half Durham; the next cross would give three fourths; the next would be seven eighths, and so on, increasing in the same ratio with each successive generation, until a herd would be reared, nearly equaling the pure-blooded Durhams in beauty and practical utility. Why will not our farmers generally avail themselves of such accessible means for speedy and certain improvement? It would add to their wealth individually, and benefit the country immensely. Instead of the poor, miserable, and almost worthless animals that are now too common in all parts of our country, we should have a breed that would justly become a source of pleasure and pride to their owners, and excite the admiration of all.

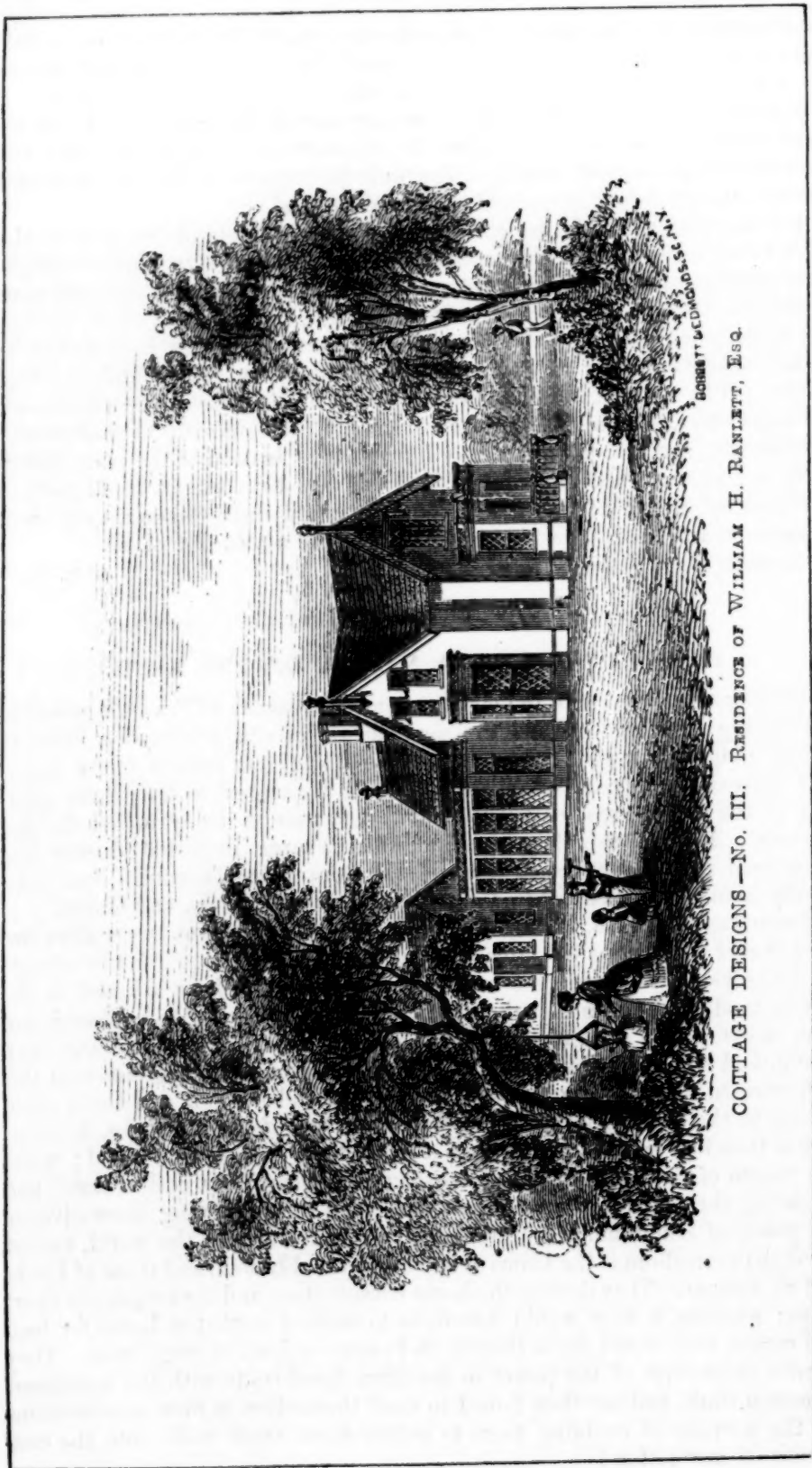
*Clockville, N. Y., February, 1852.*

S. P. C.

#### EFFECT OF MAKING A MARKET ON THE LAND.

DURING the year 1850, the eight or ten departments of France devoted to the raising of silkworms and the manufacture of silk, produced a value of 160,000,000 of francs. This is an increase of sixty per cent. in fifteen years. The share of the breeder of the worm is by far the largest, as fully three quarters of the above sum, or 120,000,000, was paid in ready money for the cocoons. Besides this large consumption, France imported during the same year 60,000,000 francs worth of silk from various countries, but principally from Spain, Lombardy, Greece, Syria, Turkey, India, and China.

From 1842 to 1846, the average of the crop of cotton was larger than has been that of the years 1849-50 and 1850-51, and almost equal to the average of the crops of the three past years; and our planters have rejoiced in the fact, as tending to prove that the yield of the land could not be increased, and that, therefore, the price must continue high. France rejoices in a large crop of silk, and America rejoices in a small crop of cotton; and the reason of this difference is, that the former combines her food and her silk, and sends them abroad in the compact form of *gros de Naples*, *gros de Soie*, ribbons, &c., &c., and is therefore enabled to maintain a direct trade with all the world; while the people of the Southern States insist upon keeping their food at home and exporting their cotton in its roughest state, and thus depriving themselves of the power of maintaining any trade with the consumers of the world, except through the medium of the looms of Manchester and Lowell, and those of Lyons and St. Etienne. They destroy the home consumption, and then rejoice in short crops; whereas, if they would determine to make a market at home for food and cotton, they would do as they do in France—rejoice in large ones. They deprive themselves of the power to maintain direct trade with the consumers of cotton cloth, and are then forced to exert themselves to form combinations for the purpose of enabling them to obtain direct trade with even the consumers of raw cotton!



## COTTAGE DESIGNS—No. 3.

In the construction of a dwelling, one consideration should never be forgotten; and this is, it is to be a *Family home*, and consequently adapted, as far as possible, to the *convenience* and *accommodation* of a family. To secure this result, the proprietor should always adapt his plan, in regard to its site, healthiness of situation, pleasantness of location, surrounding scenery, &c., &c., to best promote this important end. He should also endeavor to combine the greatest aggregate of comfort, pleasure, and health, with a symmetrical and ornamental structure, pleasant surrounding scenery, &c.; and to do all this for a certain sum of money, and that, perhaps, more limited than he could desire, requires no small degree of practical skill and intelligence. The construction of a dwelling is an operation which thousands perform but once in a lifetime; hence, a mistake or error in the selection of a site, the formation of a plan, or in any other fundamental particular, is a permanent inconvenience upon the occupants. In fact, such an error has often rendered an expensive building comparatively valueless, to the unavailing regret of its owner during the remainder of his life.

Hoping to add to the already increasing interest in improvements in architecture, particularly in our villages and rural districts, we shall continue our series of designs and plans, which will be of a diversified character, and adapted to the various tastes and circumstances of our readers throughout the country.

The annexed engravings exhibit a perspective view and ground plan (the latter on an enlarged scale) of a half ornamented cottage in the English style, recently erected on Staten Island by W. H. Ranlett, Esq., author of "*The Architect*,"\* in the composition of which the object has been to combine convenience, economy, and elegance, in such a manner that neither may predominate at the expense of the other. The exterior is sufficiently ornamental to be in keeping with the general harmony of the whole, the windows furnished with diagonal sashes, and the peaks of the roof, neatly ornamented, are prominent features of the design.

Figure 1 is a distant perspective view of the cottage and grounds, the front entrance being from the platform or balustrade on the right; the octagon containing the winding staircase, being on the opposite side, is not seen. One of the bay windows and the conservatory, are conspicuous and ornamental appendages to the main structure.

Figure 2 (on the next page) represents the plans and dimensions of the rooms, halls, closets, &c., of the ground floor, all in the clear, with the windows and door-openings all drawn to a scale of eight feet to an inch.

In the plan, A is the ante-room, entering from the rear of the cottage and opening into the dining-room B. The conservatory, C, is shown on the left, and the hall, D, with the stairs, on the right. E shows the entrance platform; F is the drawing-room; G and H, closets; I, the porch or ante-room to the drawing-room, entering from the front platform J. K and L are bay windows.

All the rooms are conveniently arranged, the dining-room, B, communicating with the hall, D, drawing-room, F, and greenhouse, C, while the drawing-

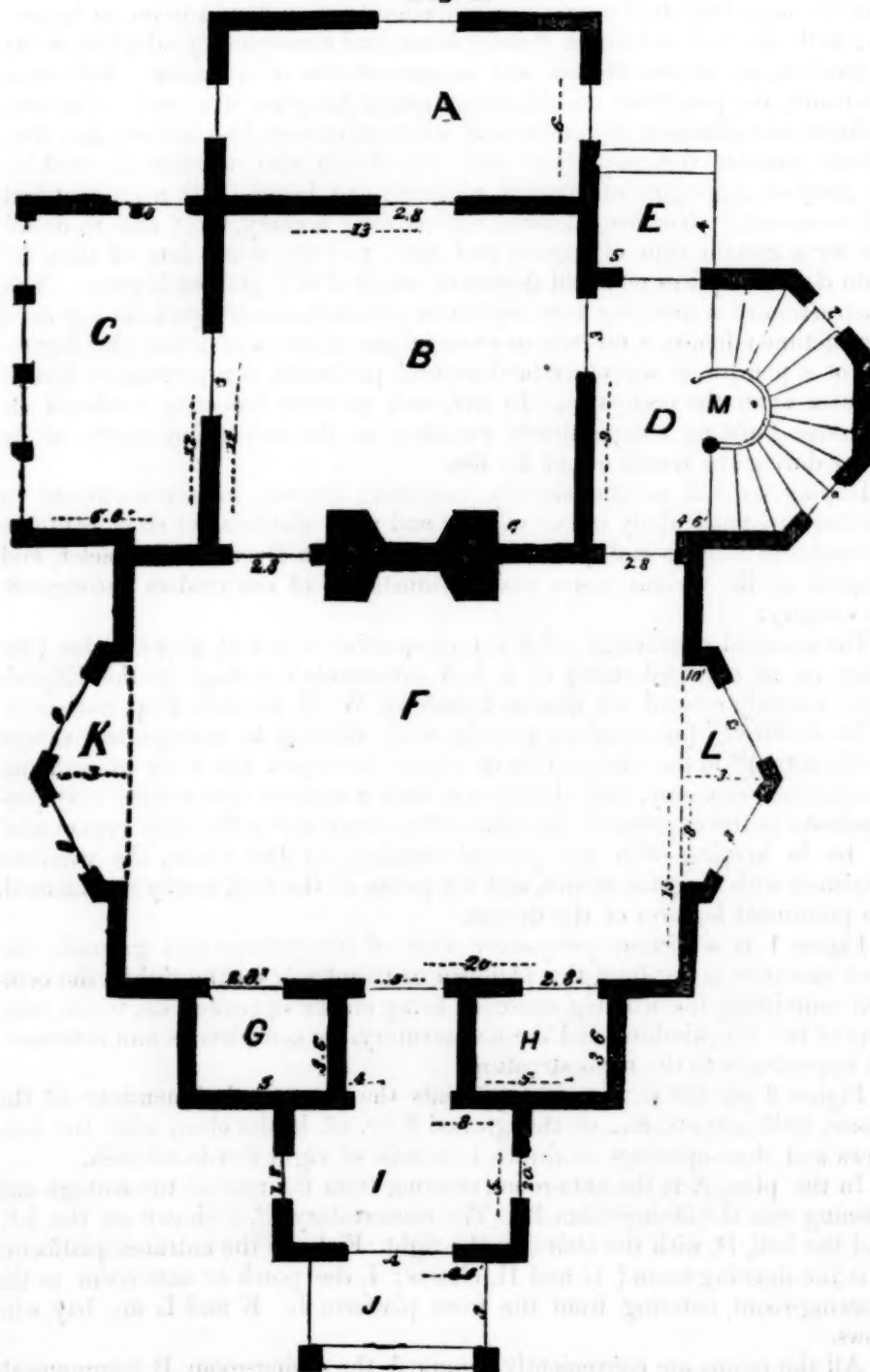
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\* Published by Messrs. Dewitt & Davenport, Tribune Buildings, New-York.



room communicates with the ante-room in front, and the dining-room and the hall in the rear.

Fig. 2.



The kitchen, with closets, wash-rooms, &c., to suit the taste or convenience of the proprietor, is intended to occupy the basement of the building.

## AGRICULTURAL RESOURCES OF CALIFORNIA.

EXTRACT OF A LETTER TO THE EDITORS OF THE PLOUGH, THE LOOM, AND THE ANVIL.

ASIDE from mining inducements, it appears a large class of persons in the Eastern States design ultimately to emigrate to our western coast, because of its agricultural advantages, and its mild, salubrious climate. To such, a two years' experience among the mountains and in the valleys of California may be of interest.

Valley, hill, and mountain may be said to represent the country's surface, the latter of which exists in much the greatest proportion, having poor soil, and producing an abundance of pine timber. The hill land, intermediate between the valley and mountain, and varying from five to twenty miles in width, is usually covered with various species of scattering oaks, having short trunks and large tops, among which the live oak is abundant. The soil is light and porous, of a reddish color, and well adapted to grazing, and probably to the production of small grain. It has little sward, and most of its grasses spring from the seed of the previous season.

Clover (of various kinds) and oats in places grow spontaneously and in abundance. The oats, however, are lighter and inferior to those cultivated farther east.

The valley country between the Coast Range and Sierra Nevada, mostly lies along the San Joaquin and Sacramento and their tributaries, and varies from one to fifty miles in width, having a soil similar to the hills, but richer, and mostly destitute of timber, except along the streams. By irrigation, these plains doubtless would produce most agricultural products abundantly, but not to the extent of the Mississippi valley.

Small grain may be successfully produced without any more moisture than that caused by the ordinary seasons.

The winter months, with November and March, compose the "rainy season," excepting which, we have but few showers.

The climate in this latitude, westward near the coast, admits the growth of the tenderest of plants at all seasons, the heavy dews superseding the need of irrigation, but most of the latter region is supposed to be under valid Spanish grants to individuals.

Stock cannot be as extensively grown as in many of the Western States, but with much less expense.

Swine fatten finely upon the clover, oats, acorns, &c.

The rainy season has continued one week, and at this time the young clover and grass give California the appearance of spring, and our stock are just commencing to thrive upon grass.

The climate of this State appears decidedly healthy, being neither subject to the lung complaints of the changeable Eastern States, nor the bilious diseases common to those of the West.

Diarrhœa, so common to the changes the constitution of the emigrant undergoes, is almost unknown to those acclimated, or to the native Californian.

I have visited the gold range for some three hundred miles, and feel assured that for many years they will prove a source of immense wealth, especially when the price of labor becomes reduced to that of other parts of the world, so as profitably to work the poorer diggings.

If, therefore, gold mining is extensively to be prosecuted for many years

in this region, agricultural interests also must be good, considering the small portion of country that is tillable.

Good agricultural implements are much needed, and command a high price; and ploughs, reapers, and threshers, such as are used upon the Illinois prairies, are the kind we want.

I send you a few grains of Russian barley raised on Bear river, said to have averaged seventy bushels to the acre, and selling for seed at twenty cents per pound.

CHAS. F. INGALS.

*Sacramento City, California, Dec. 28, 1851.*

#### REMARKS BY THE EDITORS.

We are under obligations to our obliging correspondent for his attention, and hope to receive further communications from his pen in regard to the present resources, productions, and future prospects of California. The barley referred to in this letter we have received, and it is really a beautiful specimen, although a friend recently returned from that State remarks that he has seen it still heavier and more plump. It is quite different from the barley usually produced here, the grain being larger, more full and smooth, and more nearly resembling the Australian wheat in appearance. If it can be made to produce forty bushels (instead of seventy) to the acre here, it will be a very fine yield. We trust some of our California friends will forward a sufficient quantity for trying the experiment by some of our farmers in this section, as we believe it would abundantly repay them for the trouble of introducing it into the Eastern States. Will some one be so kind as to do it?

#### THE POLICY OF SOUTH CAROLINA AND ITS EFFECTS.

"THE fact is, that South Carolina has been directing all her energies and talent to federal politics so long, and neglecting the improvement and best interests of the State to such an extent, that hundreds and thousands of her citizens are leaving, and forced to leave. This is seen and felt; the disease is obvious, and political quackery has suggested a remedy, which is still further to paralyze the energies of the State by entailing poverty on a certain class of her citizens, and then inducing that class to remain within her limits, to the exclusion of a more industrious, energetic, thrifty, property-holding, and crediting class.

"*If South Carolina wishes to retain all of her citizens, and cut off that tide of emigration which has been depopulating her for the last thirty years, she ought to commence developing her resources, creating a demand for labor, extending her railroads and plank-roads, building up manufactories, erecting public buildings—a new State-house like that of Tennessee or North Carolina, and a penitentiary where criminals may be made to work like honest men; and, above all, fostering and cherishing, in every prudent way, her schools, academies, and colleges. Instead of sending abroad for her iron, and granite, and marble, let her procure these things at home. Let her stop appropriating her money in the purchase of guns, munitions of war, and for military purposes. She has sent enough of her treasure to the North. Let her encourage the direct importation and exportation of our products and merchandise. And last, though not least, let us have done with our political excitements, and be at peace, paying our debts like honest men, and living together as friends, all anxious for the honor, glory, and prosperity of our State.*"—*Greenville [S. C.] Patriot.*

For the last half century, South Carolina has dictated the commercial policy of the Union, and having been determined not to permit the plough and the loom to come together within her own borders, she has been unwilling to permit them to do so elsewhere in the Union. The celebrated "forty bale theory" was the invention of one of her citizens, determined to prove that the South not only paid all the expenses of the Union, but also supported the people of the Middle and Eastern States. The State needs



now to develop her internal resources, but, to enable her so to do, she must make a market for labor that is now wasted, and must make a market on the land for its products, and save the manure that is now wasted. That done, she may have "direct intercourse" with the world; but until it shall be done, she will be compelled to remain dependent upon Northern merchants and Northern ships. Direct trade with the world she can never have until she shall determine to protect her citizens in their efforts to bring the loom and the anvil to take their places by the side of the plough and the harrow.

#### RAISING PORK IN VERMONT.

A WRITER in the *Green Mountain Farmer*, in answer to some inquiries proposed by the editor of that paper, in relation to six hogs slaughtered by him last December, states their weight to be as follows:—

"Heaviest, 628 lbs.; the remaining five as follows:—572, 554, 472, 470, 468; aggregate weight, 3,164 lbs. The five heaviest I sold to J. M. Chadwick, of Newbury, for seven cents per pound. They weighed 2,696 lbs., at 7 cents, \$188.72, delivered at Fairlee Depôt, one mile from my house.

"The above hogs were twenty months old when slaughtered, and were of a cross between the Berkshire and native breeds. They were pigs selected from three litters of my own raising. The sows which brought the pigs were about one year old at the time, and were judged by the listers to weigh 225 lbs. each; they were neither fat nor lean at the time, but in fair merchantable order, which, I think, is the proper condition to bring strong, healthy pigs, with least danger from accident.

"With regard to the expense of raising and fattening the above hogs, I cannot give correct or particular information, as they were managed in my usual way with store hogs, and in no particular manner for experiment. I think, however, it has not been a losing business, taking all things into account. They were fed regularly three times a day, and kept in a thriving condition. Three of them were sows, and were the lightest, having been kept much poorer for the purpose of breeding. Only two of the sows had pigs, and raised ten each, in April, 1851, and were kept mostly on slops from the kitchen, and meal through the winter previous."

The value of the manure he estimates at fifty dollars, from which he deducts five dollars for the expense of carting dirt and muck to the yard. This is very important for absorbing the liquid manure, which is of nearly equal value with the solid. The item of manure is quite an important one in fattening pork. The writer further remarks:—

"You ask my opinion as to the manner of raising pork as a source of profit to the farmer. I think the raising of pork, at the present prices of pork and grain, independent of the slops from the kitchen and dairy, would be a losing business for the farmer; but I think it for the interest of every farmer to keep a sufficient number for that purpose. I think no more shoats or hogs should be kept than can be kept in a thriving condition. I am perfectly satisfied that my heaviest hogs have been the most profitable.

"My opinion as to the best and cheapest food for hogs will be of little importance, perhaps. I think, however, that two parts of corn, one of rye, and one of oats, ground and made into pudding, would be the most economical food for hogs a great share of the time.

"In answering your question, whether it is better, on the score of real

profit, to keep hogs close, or to let them run in summer in large enclosures, to feed on grass, I will say that I have no doubts upon the question. I think it best to keep them in a pen and small yard the year round."

#### RATS DESERT A SINKING SHIP.

**IRISH EMIGRATION TO SPAIN.**—A deputation of London merchants, interested in the trade with Spain, and of certain members of the projected Peninsular Colonization Company, waited on Mr. Labouchere, on the 21st ult., for the purpose of submitting for his consideration the grounds upon which they requested a charter of incorporation. Mr. Labouchere, after having given the statements made to him the most courteous attention, said, a difficulty, which appeared to him almost insuperable, arose on a point of constitutional, or rather international law, as connected with the grant of a charter incorporating a company having for its object the colonization of any portion of a foreign territory. But though on this head he entertained a very strong opinion, he was not adverse to giving a subject of such interest to Ireland the best consideration in his power. The deputation was accompanied by Mr. Fitzstephen French, M.P., the only representative from Ireland who happened to be now in London.

The most valuable and expensive of machines is man; and his numbers always increase as the land is enriched, and the land-owner is made rich. That they may so increase, it is indispensable that the loom and the anvil take their places by the side of the plough and the harrow. When they do not do so, population diminishes, and the land-owner is impoverished. For centuries, England has spared no effort to destroy the manufactures of Ireland; but it was not until the Union, in 1801, by which the people of the latter were deprived of all protection, that her efforts were completely successful, as will be seen by the following extract from an excellent work that has within a short period passed through no less than eight editions in England:—

Before the Union, Irish protecting duties existed on many English manufactures. Among others, there was a duty on English woollens; a duty on English calicoes and muslins, so high as to be nearly prohibitory; a duty on English silk. There were duties on English cotton yarn, cotton twist, and cotton manufactured goods.

The Act of Union continued the duties on woollens and several other articles for twenty years. It continued the high duties on calicoes and muslins till 1808. They were then to be gradually reduced till they should fall to 10 per cent. in 1816, and to nothing in 1821.\* The duties on cotton yarn and cotton twist were continued till 1808, and were then to be gradually reduced to nothing in 1816. The linen trade was encouraged by a parliamentary grant, withdrawn in 1826.

Now see the effects, first, of protection, and next, of its withdrawal, or rather a specimen of the effects:

It has been stated by Dublin tradesmen, acquainted with the facts, that in 1800, they had 91 master woolen manufacturers, employing 4,918 hands. In 1840, the master manufacturers were 12; the hands, 602.

Master woolcombers, in 1800, were 30; the hands, 230. In 1834, masters, 5; hands, 66.

Carpet manufacturers. In 1800, masters, 13; hands, 720. In 1841, masters, 1.

Blanket manufacturers in Kilkenny. In 1800, masters, 56; hands, 3,000. In 1822, masters, 42; hands, 925.

Broad silk loom weavers in Dublin. In 1800, at work, 2,500; in 1840, 250.

Calico looms in Balbriggan. In 1799, in full work, 2,000; in 1841, 226.

Flannel looms in the county of Wicklow. In 1800, 1,000; in 1841, not one.

#### In the city of Cork—

	1800.	1834.
Braid weavers, . . . . .	1000	40
Worsted weavers, . . . . .	2000	90
Hosiers, . . . . .	300	28
Wool-combers, . . . . .	700	110
Cotton weavers, . . . . .	2000	210
Linen check weavers, . . . . .	600	none.

Cotton spinners, bleachers, calico printers, thousands employed—utterly extinct.

The linen trade, protected and fostered till 1826, was not in those days confined to the

North of Ireland. In Clonakitty, in the county of Cork, £1200 a week was expended on the purchase of coarse linen webs, so late as 1825. In Mayo, £111,000 were expended in purchasing the same species of web. In 1825, the sum of two millions and a half sterling were expended in Ireland, in the purchase of coarse unbleached home-made webs.

I am obliged for these specimens of the ruin of Irish industry to Mr. Butt, Q. C. at the Irish bar, who informs me that they could be very much extended.

Before the Union, there were under protection Irish woollen manufactures, Irish carpet manufactures, Irish blanket manufactures, Irish silk manufactures, Irish calico manufactures, Irish flannel manufactures, and Irish stocking manufactures. These manufactures are now smothered and extinct.

But what ought they to have been, with increased population and power of consumption, with the application of steam, with improved mechanical and chemical agencies? What would and must they have been, but for the blight of English competition, withering at once both the power of producing and the means of purchasing? What might they be made *EVEN NOW*, should England, instead of blindly chasing the phantom of cheapness, no matter of what sort, at once and seriously address herself to developing the unexplored but prodigious productive power of Ireland?—*Sophisms of Free Trade.*

Having first destroyed the manufactures of that country, England has lately done the same by her agriculture; and the consequences are seen in the fact, that the whole people of Ireland now flee from the land, and the land-owners are ruined.

#### THOROUGH OR HIGH FARMING.

BY PROF. J. J. MAPES, IN THE JOURNAL OF AGRICULTURE.

THIS term has been generally adopted by the best European writers to express such a system of farming as would embrace the use of capital liberally, and at a maximum profit, in contradistinction to low farming, or the procuring of minimum crops, with no investments beyond the purchase of land and cheap workings.

Those who pursue high farming argue that it is both safe and profitable, and that they use their capital liberally to put the land in the best possible condition by under-draining, sub-soil ploughing, convenient arrangement of cisterns, pumps, manure-houses, &c., &c., so as to have light expenses by labor-saving arrangements, at the cost, perhaps, of heavier original outlays.

The high farmer has analysis of his soils, and uses upon them all the manure they are capable of converting into plants; or, in other words, all that can be used with profit, instead of only so much as will only produce a crop. For such crops as are found to pay a profit for the labor, the soil is ploughed two, three, or more times before planting; and where a thorough admixture of the manure through the soil is found to be more advantageous than simply to plough or harrow it in, a large cultivator or stirrer is liberally used for this purpose. For crops which are advanced materially by continued irrigation, even steam-engines are kept in motion to insure the necessary supply.

Cattle on such farms are never pastured, but always fed in buildings supplied with every convenience to save manual labor. The supply of water is always at hand, and readily led by gutters to the front of the animals. The arrangements for warming and ventilating are such as to insure a steady and healthy temperature and supply of atmosphere. The manures are rapidly removed as voided, and composted with as much inert vegetable matter as can be converted by its fermentation into useful amendments. The fluid excretæ is led by gutters to masses of matter, which receive it and retain the volatile portions from evaporation.

If the soil is short of potash, soda, or any other constituents of the required crops, these are added; not directly to the soil, but to the compost-heap, so as to advantage by their decomposing or chemical effects before going to the



roots of plants. Manures are never left immersed in water, parting with gases without undergoing proper decomposition; but the drainage of manure-heaps is daily returned to them, to supply the necessary amount of moisture to insure decomposition without burning or *fire-fanging*.

If ammonia is lost by steaming or overheating of manures, the drainage-cistern of the heap is immediately supplied with dilute sulphuric acid, or some soluble sulphate required by the compost, which changes the volatile carbonate of ammonia to the fixed sulphate of ammonia, and thus all the excretæ of animals is saved in its best and most efficient form.

Some old-style farmer may say, "This is all very well; but where is the money to come from, and when can you get it back?" We answer, as to the latter inquiry, that many men in England and elsewhere, as tenant farmers, have made large fortunes by high farming, while but few have done so by any other style of culture. Now, while free trade is paralyzing the efforts of the farmer, those who pursue high farming alone are able to succeed. We do not assert that all who spend much money succeed as a consequence of such expenditure; but those who use their capital freely and *judiciously* do succeed, and find it more to their interest than to invest on bond and mortgage at the ordinary rates of interest. Hundreds of tenant farmers in England are borrowers of capital on interest, extending the amount of their operations as their increased capital may permit.

How many farmers do we know in this country, who have heired fortunes, or become rich by the rise of property, and whose farms are of less value than their more industrious neighbors', from the want of capital properly applied to them! They loan out their surplus incomes at six per cent. per annum, when a part at least could be used on their own farms at twelve per cent. with profit.

Let no man, however, attempt high farming, who thinks a fact becomes a falsehood by having been printed. He must have brains enough not to rail out indiscriminately at *book farmers*. He must even read books, until he knows how to answer the following questions, at least, and as many others appertaining to his calling as these may suggest:—

Do plants receive the whole of their nourishment from the soil, or part from the atmosphere? and what from each?

Do those received from the atmosphere enter the plants above or below the surface of the soil? and, if in part below, what conditions of the soil are necessary for their reception?

By what means are these conditions of the soil to be attained?

How does moisture affect the vegetable economy?

To what depth will the roots of plants enter the soil if properly prepared?

To what depth do the solutions of manures penetrate the soil? and if not to an indefinite depth, why?

In what manner, and from what causes, do plants receive the constituents of manures below the surface of the soil?

Of those solutions of manures which filter downwards, what portions are lost to plants? or of those which rise as gases, what portions escape into the atmosphere without being absorbed by plants? and why? What modes may be adopted to arrest them until plants can make use of them?

Let those who would censure high farming find the farmer who can answer these questions, and they will find a successful votary of our art, and one, too, who can enjoy nature as his God intended he should. Such a farmer can find delight in observing nature's laws, and "*look through nature up to nature's God.*"

All these questions may be answered; and our readers will find them

answered if they will read the *Journal* with the same care they would examine a mortgage when buying it. Some may say farmers have not time to become chemists and natural philosophers; nor is it necessary that they should; but they should, for their own happiness and profit, know so much of the sciences as to be able to read them understandingly and to apply them readily.

It is not necessary that a farmer should be capable of analyzing his own soil, but only to understand the analysis when made. Because a farmer may occasionally have a lawsuit, he need not necessarily study law, and become a lawyer; and if an analysis will cost but five dollars, he is a lucky fellow if he does not pay more money to lawyers than to chemists.

But some say, they are too old even to study so much as to understand an analysis, or to learn how to apply manures in accordance with it. If so, employ a consulting agriculturist to inform you, and pay him less for enabling you to double your crops than you now lose by wasting manures from bad management; and if you cannot find a more competent one, apply to us.

#### HOW PROTECTION INCREASES AND BRITISH FREE TRADE DECREASES THE CONSUMPTION OF IRON.

THE history of the iron manufacture for the last few years furnishes an instructive lesson to the statesmen of this country. This article enters into such general use in every occupation of life in all countries advanced beyond the first step of civilization, that it may well take rank among the necessities of life among ourselves.

The importations of bar and pig iron for the year ending 30th September, 1842, were	100,055 tons.
The estimated production in the United States for that period, was	230,000 "
Making an aggregate consumption of	330,055 "
Or 40 $\frac{1}{4}$ pounds per head.	
In 1846, the importations were	69,625 "
And the production estimated at	765,000 "
Consumption,	834,625 "
Or 92 pounds per head.	
In 1848, the importations were	153,377 "
And the production,	800,000 "
Consumption,	953,377 "
Or 99 $\frac{1}{4}$ pounds per head.	
In 1849, the importations were	289,687 "
The production,	650,000 "
Consumption,	939,687 "
Or 95 $\frac{1}{4}$ pounds per head.	
In 1850, the importations were	337,532 "
The production,	564,000 "
Consumption,	901,532 "
Or 86 $\frac{1}{4}$ pounds per head.	
In 1851, the importations were	341,750 "
The production,	413,000 "
Consumption,	754,750 "
Or 69 $\frac{1}{4}$ pounds per head.	

Thus we perceive that the actual consumption of iron, which, under the

high duties and prices, was steadily augmenting in quantity, is, under the present reduced rates, both in duties and prices, gradually falling off, notwithstanding the increase of population and the great extension of our farming interests.

#### CULTIVATION OF FRUIT AND FERTILITY OF SOILS.

MESSRS. EDITORS:—In perusing your valuable journal, I noticed an article on the management of apple orchards, in which the writer says, many people complain about the unproductiveness of their orchards, and their unsuccessfulness in propagating and cultivating fruit trees. He says, "there must be some cause for this failure in raising and producing fruits." I believe it to be highly beneficial for farmers, in different sections of the country, to discuss, through the columns of agricultural journals, the best modes of culture, not only of fruit trees, but of different kinds of crops, giving the quality of the soil, the kind of manure applied, and the exact product of the same. I am willing to admit there must be some cause for this failure in raising and producing fruits, and, in a great many instances, it may be beyond our control.

On my farm, I have one hundred apple trees, of the same kind of fruit; five of those trees were transplanted fifty years ago. They have been great bearers, producing uncommonly fine fruit, until within five years past, since which they have totally failed. The product of those trees was so great, that I have sold the fruit, on an average, for \$150 a year. It induced me to transplant one hundred trees of the same kind of fruit, adjoining the old trees, about fifteen years ago. They too have proved a failure. Although the trees blossom and set very full with apples every year, they fail to produce fair fruit. When the apples get about the size of a hickory-nut, they become very rusty, crack open, and commence falling off, and continue to do so until all are gone. I do not believe this failure is the want of proper management, nor do I believe in the management of the writer above referred to; although I believe, under such treatment, trees may sometimes bear well; but, one thing is certain, the fruit will not be so large nor so fair. All kinds of fruit trees need manure and culture as much as corn and potatoes, to bring the fruit to perfection. Orchards ought to be thoroughly ploughed, but not too deep, especially among old trees, as it injures the roots. The writer says the idea of ploughing orchards, when the trees have become large, is not a consistent one. I would ask him, if trees, at an advanced age, do not require as much, if not more, cultivation than young trees? They certainly absorb more substance and more moisture; and no person will deny that the soil, thoroughly worked, will not retain the moisture longer than when not worked, which is very important on a light soil in a dry season. I have known very old orchards, in my own neighborhood, that have ceased to bear, because they had not been cultivated in ten years, and, by passing into other hands, they have been renovated by constant cultivation and manuring.

As regards my own experience in the cultivation of fruit trees, I have, on that part of my orchard above referred to, taken great pains in applying manure of different kinds, having used marl, lime, ashes, &c., and ploughed in green crops, to supply the soil with vegetable matter. I have also removed the old bark, by the use of a scraper; but all to no purpose, as far as bearing is concerned. My trees, however, are in a very thrifty condition, but I do not expect to get a crop of apples until I understand better the nature of the soil, and what ingredients it requires to bring the fruit to perfection. Now, whatever earthy ingredients are found in the wood or bark of trees, are drawn



from the soil; and if the soil is deficient in any one of these, we cannot expect our fruit trees to bear well, or bring their fruit to perfection. In ascertaining what the deficiency is in soils, for the productiveness of an orchard, it is highly necessary for farmers to understand chemistry, so far as to enable them to analyze their soils. I believe a man may be a farmer all his lifetime, and, unless he understands the nature of his soil, and what it is composed of, he may apply different kinds of manure, at a great expense, and not add to its productiveness or fertility. He may, for instance, apply lime, and for the growth of certain kinds of crops there may be lime enough already in the soil, and the application of more may injure the crop. Also, with regard to marl, I have known farmers in my vicinity to apply marl year after year, believing they could, with that alone, bring their soil under a high state of cultivation, not sowing any grass seed, or supplying any green crops to furnish the soil with vegetable matter for the marl or lime to act upon; consequently, it becomes so full of that ingredient, that it burns up and destroys the crops.

J. L. CONOVER.

*Middletown, New-Jersey.*

#### WHO PAYS THE DUTY?

THE annexed account of an interview between the writer and Mr. Silas Wright, which we take from a contemporary journal, will have interest for those who still doubt if the English producer of cotton goods is not in the same condition as the American producer of food and cotton—both being compelled to overcome the obstacles which stand between them and their market, whether in the form of freight, insurance, or duty. If they are, then is it the foreign producer and not the domestic consumer that pays the duty; and then must the producer of food and cotton gain on all hands by every measure tending to make a market on the land for the products of the land.

"A Committee from New-York, of which I was a member, called on the late Hon. Silas Wright, of the Senate, and endeavored to engage him in a conversation on the tariff. He objected mildly, for at that time his party had not fairly declared on which side of that question they would array themselves.

"Mr. Wright said that his great objection to a protective tariff was, that 'the consumer paid a direct tax to sustain the manufacturer.' We then asked him if he did not think that the competition arising from protection soon caused the protected article to be furnished at a reduced price. He said he had heard that argument before, but was not ready to admit its truth; that such had not, in his opinion, been the result with articles formerly protected.

"'Well, Mr. Wright, if it could be clearly shown that every article which has ever received five years' consecutive protection by tariff, has been furnished at the end of that time at a less cost to the consumer than the foreign cost at the time the protective duty was imposed, would you then agree to vote for a protective tariff?' 'Yes, certainly,' said Mr. Wright; 'and I will undertake to name many articles to which your rule will not apply.' 'Well, sir,' said our committee-man, 'we hold you to your promise either to find the exception or to vote for the tariff.'

"'Are you really serious, sir,' said Mr. W., 'in supposing that I cannot find the exception?' 'Certainly, sir; we defy you from the many hundred articles which have been protected from time to time to find one which is not within our rule. The very moment capitalists find that a manufacture is protected, they immediately invest their capital; and others doing the same, causes competition and consequent improvement in machinery, and thus the price is reduced, and further protection, at the same foreign cost, rendered unnecessary.' 'Why,' says Mr. W., 'look at the article of *nails*; their cost is in the material; why have they not been reduced by your rule?' 'So they have; and if you will recollect, a few years ago nails now worth 4 cents per pound were then sold at 12½ cents; and were it not for the use of American machinery, invented in consequence of the competition arising out of protection, the same nails could not now be imported from

England for less than 10½ cents per pound.' After proposing a few other articles of manufacture with like success, Mr. Wright said, 'Well, gentlemen, you have my promise, and I shall fulfil it; but you will find it will be by pointing out the exceptions to your rule, and not by voting for the tariff.' I need not tell you that Mr. Wright was diligent in trying to find the exceptions, and with full time he distinctly failed to do so, and therefore redeemed his pledge by voting for the tariff of 1842, and by so doing made it a law. If the opponents of a judicious tariff have any statesman more capable than Mr. Wright of finding the exception to the rule, let them produce him; but until they do so, they should cease to assert that 'the consumer pays the duty,' &c.

"MORE ANON."

#### CULTURE OF INDIAN CORN.

MESSRS. EDITORS:—Indian corn is a great staple crop throughout this country generally, and much use is made of it, both as food for man and feed for many of our domestic animals, while too much of it is wasted in the distillery. If we were wholly deprived of this crop, we should feel the want of it more than of any other which is cultivated, especially within the New-England States. This being the case, we ought to be sure that we apply the best mode of culture. In this particular, we here differ much from the Middle States, where they do most of the labor in its culture with ploughs and harrows, with horses attached. We here do much with hoes, in digging up the soil around the hills; there, it is left more level and loose in its place, for the corn-roots to feed, and longer retains its moisture. In this last mode of management, there is not half the labor as in the former, and it is, I judge, much more favorable for a crop. But what has been said is not the greatest object in view. In Judge Buel's day, there were great controversies in regard to the management of corn when it was about maturing. It became quite a question whether, when corn was "turning," or "glazing," it should be cut and shocked, to procure the best and heaviest crop. It was generally conceded that the corn would be heavier by cutting it up in that early stage of turning, when full, before evaporating and wasting. I was then entirely against cutting it up, believing that the moment it was cut off it ceased to be fed, and consequently shrunk. Another controversy took place in regard to corn-stalks remaining on until fully matured, the tops feeding the ear to a great extent, and thus causing much saving. At that time it was generally believed that with the stalks on, the best and heaviest corn was produced.

From that day to the present, what has been the improvement? Are those things fully tested to the general satisfaction of all of us who cultivate corn? And ought we not to be able to answer them from actual experiment?

On this subject, I can say I have satisfied myself, by experiment and observation, that there are great losses sustained both from cutting up and shocking corn in the early stage of harvesting, or suffering it to remain untopped to its full maturity. The effects of either mode are similar. In cutting and shocking, the moment the stalk is cut off, the ear is no longer fed, but a constant evaporation takes place, to the great shrinking of the whole stock, cob and kernel. So it is with that with the top remaining on while maturing. Corn loses its vigor in proportion to its decay, till finally there is no circulation of sap. In passing through this stage of action, the root fails to supply the top when remaining on, and forces to maturity the whole stock, particularly the stem of the ear, causing sudden weakness and the falling down of the stalk, and hanging and shrinking of the kernel. When corn is topped, as usual, as proved by the experiment, side and side, the ears of the topped remain with stiff stem, and it is later, and much fuller kernel. The difference in the weight, from the two different modes of culture, is as follows: Cut with tops on, or

shocked, per bushel, 57 lbs.; topped in usual season, both dry, 65 lbs.; difference, 8 lbs.; loss in measure, in shrinking, one eighth, or half a peck. This is a great difference, from the different modes of husbandry. It is surprising that the farmer blunders along through tradition, without notice or experiment. Here we see, from a different mode of culture, a loss of fourteen per cent.!

I hope I shall not exhaust the patience of my readers, should I seem rather prosy in stating some facts on the culture of this most valuable product; for it surely behooves us to bring forward every item of knowledge that will contribute to enhance the crop.

In my experience, contrary to all practice, or even theory, I blundered into a practicable *reversed* method to any I have yet named, which, strictly followed, will give a great increase of this crop. It is this: *be sure that you carefully top your stalks when your corn is in milk*. Don't be startled, reader, but try the experiment. A few years since, while in my corn-field, it occurred to me to top a few hills, to see the effects of topping corn in milk, not as full as usual for boiling; and, contrary to my expectations, on afterwards examining the ears, I found them all unusually full, even to the bursting of the husks. They were of unusual length, and the kernels full and plump. It is my belief that this theory, put in practise extensively, would result in great gain in a crop of corn, possibly twenty-five per cent. I hope to hear of this experiment being well tested. There is nothing which I have neglected in my different modes of culture, that I so much regret, as my not following out this experiment, and putting it in practice. I think there should be two cuttings of the stalks, to be sure of cutting when the corn is of the right age. While writing, a friend who has called on me coincides in my views, from his own observation, his corn having been broken into by his cattle, and the stalks eaten and broken off when in silk. The ears remaining were found on maturity with stiff stems and full kernels. It is his full belief that, by this mode of culture, a great advantage may be obtained.

I now intend to notice more particularly the difference in management necessary to produce a crop of corn, and the results therefrom.

People differ very much in the distance of planting their corn; some plant three feet and some four apart. This difference depends somewhat on the ground—whether high or low, rich or poor. If high and light, I would plant a large kind of seed, the hills at least four feet apart. On such ground it takes deep root, and withstands the drought far better than small seed, which soon yields to hot suns and droughts, for want of more depth of root. Ground in good tilth, tolerably moist, is best adapted to small seed; but you cannot expect so great a crop as from that of large growth. The greatest difference in a crop of corn, however, results from good or bad hoeing. It is often said half depends upon the *culture* of corn, but I say *all*. Prepare a piece of land well for corn, and plant it with the greatest care, and do not hoe or dress it at all, and you get no corn; but if you slightly hoe it, or, as it is called, half-hoe it, you get half a crop; if you hoe *well*, you get a full crop. The gentleman spoken of in the case of topping corn when in milk—whose experiment, in my mind, is reduced to a practicable certainty—related to me a story. A neighbor of his hires a piece of land, (five acres,) and is in the practice of tilling it yearly, and well manuring it. Last season, he planted it with corn, and called on him to cultivate it. Being neglected until late in the season, the ground in high tilth, the weeds had got high; and of course, the corn being slim and small, he could make but poor work with the cultivator. It was suggested that it had better not be hoed, as he would not get pay for



his labor. For the looks of it, however, he determined to hoe it, and the result was that he had no corn.

I next propose to consider the loss or difference in the different modes of dropping seed-corn. Every observing farmer has noticed that single kernels of corn, when dropped into ground in high tilth, in the right season, will produce two or more shoots. Those shoots, suffered to grow, are sure to outgrow the original stalk, and often bear the best ear; but in case of a full hill, to the number of five, and scattered eight inches across the hills, they being three feet apart, centre to centre, leaves in fact the corn but two feet four inches between hills. Now, on quick, highly manured land, the corn will be thick, every kernel producing three stalks each. In its early stage it is very handsome, but it soon feels a pinch from exhaustion of soil, want of rain, and circulation of air; and if a sharp drought occurs, the crop is totally lost. I have planted a few rows in this manner, and a few the same distance, centre to centre, placing the seed in a space of an inch or less. In their early stage, the scattered seed far excelled the other; but when spindled out, the closely planted corn was much the tallest, heaviest, and largest eared. This close seeding prevents the shoots from growing to any size, leaving space for sun and air, rendering it much easier to hoe the ground, and is much less exhaustive of its natural strength and moisture. In this experiment I found, in favor of the close-planted seed, seventy-five per cent., since which I endeavor to have my seed-corn dropped as close together as possible.

Of corn-mixing, there are erroneous opinions existing. A general opinion is, that it takes its relative qualities from the fecunda that falls from the spindle and blows from field to field; but it never appeared to me that this small and dry substance, settling on or blowing against a corn-stalk, could have the effect of changing or mixing with any varieties. I have thought it more rational to attribute it to the egress and ingress of the odorous perfumes of the atmosphere which escape from them, and, like all vegetables, feed therefrom in part for their growth, and they cannot do otherwise than partake of the nature of each other. I planted a few rows of corn in my garden last season, some early and some later, side and side. There were two rows only of the early, and three of the late. The early spindled out quite early. A gentleman calling, noticing the corn, remarked: "Ah, your corn is spindled out," (sitting in his carriage six or eight rods off) "Yes," said I; "how many rows do you see spindled?" "Three rows." "How much difference in the two kinds should you judge there was between those spindled and the two rows that are not?" "About two weeks." "Do you see any difference in the three spindled rows?" "No, I do not," was the reply of this very observing, excellent farmer. I explained to him that one of the early rows—that next to the late—was of the late kind, but, being planted by the side of the early, had partaken so much of its nature as to cause this difference, reducing it almost entirely in every particular to that of the two early rows. This was new to the gentleman, as well as to myself. We had both heretofore concurred in the belief that, in the mixing and changing of corn, it would never show its effects, particularly the first of the year. These results ought to be sufficient to induce any one to abandon the mistaken notion of the change from the effect of the farina blowing into fields at great distances, as this change was effected in its early stage of growth, before its spindling to give off this bloom. I can conceive of no other cause than that herein named to produce the effect.

There is one other mode of management for a crop of corn, which I had rather forgotten in its turn. It often happens at the closing of our planting, that we have small parcels of manure left that is coarse, and which is mostly

made after the usual spring work is done; here, it will be perhaps the middle of June. Those piles, with scrapings of any thing like manure that would only lie in the way, should be collected, and a piece of ground selected that has been considered too low and wet to plant for a crop, consequently the grass will be very much "bound out." At this season, there will be found with the old rowen and fine grasses considerable of "stuff." With those collections of manure you may dress from an eighth to half an acre. Plough no more than you can dress well; spread the manure on the sward before ploughing. Your plough must be sharp, and guaged with a truck or a foot. I prefer a foot, as it clears away rubbish, while a truck jumbles over and raises the plough. You are to plough this ground; that is, sink your plough as near three inches as possible, and make good work. This ground lies up lightly, and is soon warmed through by the sun. Your corn will never suffer from drought nor wet. In planting, scrape small, flat excavations, but do not go through the sward. A very small quantity of old manure in the hills will give it a good start. In this mode of culture, I get much my largest crop of corn—say eighty to one hundred bushels per acre—and the ground will be in a favorable condition to harrow down the ensuing spring to grain and grass, or grass alone. I am thus particular, as it is new in practice, and I am the only one who has followed it, and that for two seasons only, but with the greatest success. A little deviation—as deeper ploughing or digging through the sward—would destroy the system. In planting, I think four kernels to the hill is best, to insure the largest crop generally. My opinion is, three stalks, to stand, is better than more. To be sure of three stalks, we drop four kernels, one for loss or failure.

The next thing in course is to know how to hoe the corn. On this very shallow-ploughed ground, the use of either the plough or the cultivator would tear this thin and light turf entirely asunder, and unfit it for any crop. The plough for this work—turning the sward—is a light, old-fashioned kind, with a foot in the beam; and a light horse-harrow, (one with wooden teeth being preferable,) harrowing lengthwise of the furrow, may be used with care, filling up the cracks of the furrows, &c., and but little else is needful: it will want a little "scuffing" with the hoe. The corn, by this management, and at this season of the year, will grow luxuriantly, and overpower the few weeds that may spring up after the hoe. I can say from experience that, by this mode of culture, corn will attain a much larger growth and mature sooner, than by any other mode within my knowledge.

Portsmouth, N. H.

ABEDNEGO ROBINSON.

#### MINERAL RESOURCES OF THE SOUTH.

THE *Wilmington (N. C.) Journal* says that the bituminous coal of the Deep River coal fields can be placed in New-York at a cost of \$2 58 per ton, and the anthracite coals at a cost of \$2 98 per ton.

North Carolina abounds in coal and iron ore; so does Virginia; so does Maryland; and so do various other Southern States. They abound in fuel with which to drive the steam-engines required to convert wool into cloth, and in the labor that might be employed in making cloth and iron, and with food to feed the laborers; and yet they waste the food and the labor, while permitting the vast treasures of the earth to remain undeveloped; the consequence of all which is, that their land is scarcely worth *cents* when it might be made worth *dollars*, and would be so made, could their people but determine to make a market on the land for the products of the land.

## THE HARROW AND ITS USES.

THE use of the harrow in agriculture is of great importance, in the proper preparation of the soil for the reception and promotion of the growth of the seed, as well as the subsequent cultivation of the crop. It is next in importance to the plough, its purpose being to pulverize the ground, which has previously been loosened by that implement, and to cover the seeds which have been sown on the surface of the soil. It is also frequently used in New-

England, between the rows of corn and potatoes, beans, &c., to loosen and prepare the surface for the free use of the hand-hoe, so generally applied in all the rough and stony agricultural districts of the Eastern and Northern States.

Important as is the operation of harrowing, and second only to that of ploughing, we think this implement scarcely receives that attention which its merits claim. The operation, in many instances, is very imperfectly performed, and the implement itself very improperly constructed. An unwieldy, rough, triangular frame, with a few clumsy pins, or rather "stubs," driven through it for *teeth*, is frequently used as an apology for the harrow, which, instead of loosening and pulverizing the soil, proves a dead weight or *drag*, rendering the earth more ridgy and less porous than before its application.

The *Scotch Harrow*, as represented in Fig. 1, is, perhaps, the most perfect implement of the kind in general use. It consists of two parts, joined together by iron rods, having hasps and hooks. Each part consists of four bars of wood, connected together by an equal number of cross-bars of smaller dimensions, morticed through them. The former of these bars is about two and a half inches wide by three inches deep, and the latter two inches wide by one inch

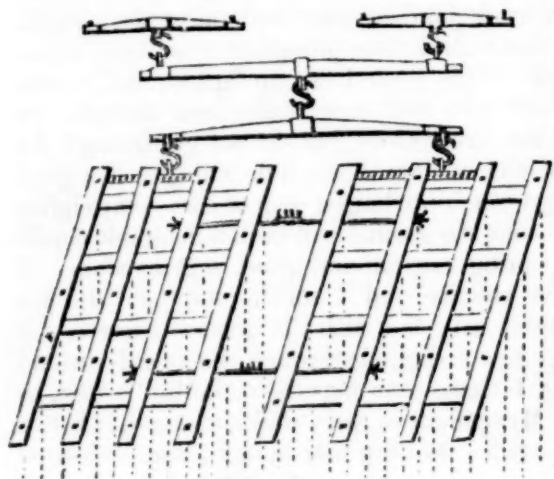


Fig. 1.

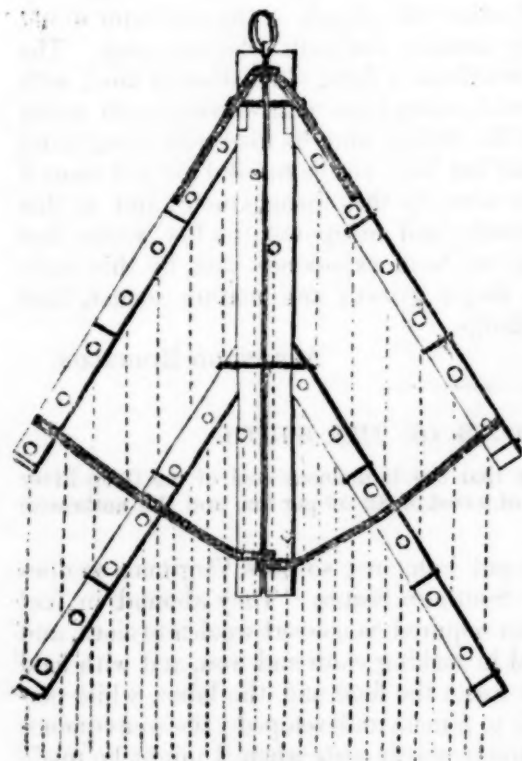


Fig. 2.

deep. The longer bars are placed at a certain angle with those crossing



them, forming the figure of a rhomboid. The teeth are placed in the longer bars, at equal distances from each other, and the inclination of these bars is just sufficient to cause the perpendiculars from each of the teeth, falling upon a line drawn at right angles to the line of the harrow's motion, to divide the space between each bar into equal parts, so that the various teeth, when the instrument is moved forward, shall equally indent the surface of the ground over which they pass. These harrows can be used either single or double.

Fig. 2 represents *Geddes' Folding Harrow*, which is generally esteemed the best. Some of the larger sizes are so constructed, that the front and rear parts can be detached, forming two single harrows, which can be used separately when desired. The two side-frames are joined together by hinges, in such a way that the harrow works the surface of uneven lands quite equally; and when one half is folded over upon the other, it is easily transported about the farm. The teeth are made of the best Swedish iron, steel-pointed, and the upper end is formed to fit a mortice made tapering from the lower to the upper side of the timber, with a screw upon the upper end of the teeth, and are made fast by nuts being screwed close down upon iron washers, which prevents all liability of the teeth to become loose and drop out, as in most kinds of harrows.

The Geddes harrow is superior to the square harrow, as it draws from one point, with a regular, not a straggling motion, and, of course, is easier for the team. Either part is easily lifted when in motion, to let off any trash that may have collected among the teeth.

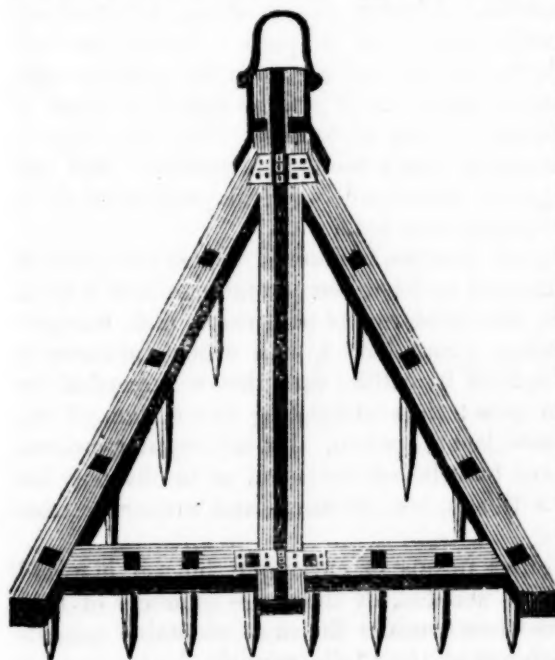


Fig. 3.

Fig. 3 is a triangular folding harrow, with the teeth like those of Geddes' harrow, but is constructed more strongly, made heavier, and more suitable for rough and stony soils. The latter is, perhaps, better adapted to this purpose than any implement of the kind in use, easily adjusting itself to any inequalities of the surface, and being sufficiently strong and heavy to loosen and penetrate the most gravelly soils.

We feel that we cannot better serve our agricultural friends than to urge upon their attention the free use of the harrow, as we are firmly convinced that, by so doing, they will find themselves doubly repaid in the productiveness of their crops. The

above harrows, with the various agricultural implements, may be obtained at the warehouse of Messrs. Ralph & Co., 23 Fulton street, New-York.

**TO MAKE PRESERVES KEEP.**—The secret of preserving them from change is to exclude the air. The easiest way to do this is, to brush over a sheet of paper with the white of an egg, and cover the jar, pressing it down around the edges while moist, and it will cement perfectly tight. It is cheaper, neater and better than sealing up the mouth of the jar with wax or covering it with bladder.

## ENGLISH AGRICULTURE.

*To the Editors of the Plough, the Loom, and the Anvil :*

To an agriculturist of the mother-country accustomed to the climate and mode of tillage in England, when he arrives in the Northern States of the Union, to pursue his accustomed calling, serious difficulties present themselves, which can only be overcome by observation, perseverance, and experience.

One great hindrance to his success here is his inability or unwillingness to get rid of those ideas and customs to which he has been habituated at home. The great price which is paid here in the shape of wages, generally disheartens him; and the severity of the winter season, which renders the maintenance of live stock so much more expensive than what he has been accustomed to, induces many an agriculturist to give up his farm in despair, and seek some other employment, in his opinion more lucrative and pleasant.

It is generally admitted, that in no country has agriculture been carried to so high a state of perfection as in England, and yet this is by no means to be attributed to the natural fertility of the soil; for, generally speaking, its present great fruitfulness may be attributed to art. It is a made soil, rendered so by the numerous herds and flocks which graze in its pastures and meadows during the long summer months, and which, by reason of the mildness of the winter, are less exposed to suffering and disease.

The same process of cropping in England it would be impossible to pursue here. They have there what is termed the *four-course change*, meaning a change of crops in succession, consisting of barley, clover, wheat, and finishing with the fourth and last crop, with beans, oats or peas. Turnips are not considered a crop, as they precede the barley, and are sown for a winter supply; the *ruta бага*, or the Swedish turnip, as it is there called, is sown in May or June, and the common turnip in July or August. The *ruta бага* is used in fattening cattle, as it possesses much more rich qualities than the common turnip, which latter are grown almost solely for the purpose of feeding milch cows and sheep, when rearing their young.

The land in England, among good farmers, is allowed to rest one year in five. The land not cropped is expected to have four ploughings, and a good dressing of manure, after which, the winter-crop of turnips and mangel-wurzel is sown, and, in the following spring, barley, with which the clover is sown, which is either mown or fed off by cattle; and this is succeeded by wheat, followed by oats, beans or peas; thus completing the system of the four-course change of which we have before spoken. By this regular process, the English farmer so divides and parcels out his land, as to diversify his crops and give his whole land a tillage, rest, cleaning, and manuring once every five years.

But by this method, without other means of enriching the soil, it would soon become impoverished. This is avoided, by the large numbers of live-stock, particularly sheep, which we there consider the most profitable animals to keep, for they carry the dung-shovel at their tails, crop the herbage closer than any other creature, and their manure is second to none in point of strength and duration. A good farmer is expected to have as many sheep as he has acres of land.

The great ability of wintering this kind of stock in England, an American can have no idea of. When the breeding season of sheep commences, and the weather is open, the ewes are kept out upon dry green pastures, and driven into the yards at night, when the weather is wet and cold, where are sheds provided for them. Now it is that the great turnip crop comes into

use. In the month of November, the largest of the crop is put up and housed in the yard, under sheds, while what is left in the fields, amounting, perhaps, to one half of the crop, is fed off there, if there be no covering of snow upon the ground, which seldom lies there long enough to be of serious annoyance to the farmer.

The manner of grazing turnips in this country, in the open air or fields, is as follows: Every farmer has a certain number of hurdles, which are a kind of light frame-work, made with a sort of spline or split poles, nailed together, thus forming a frame about seven feet in length and three feet high. The two end-pieces are longer than the height of the hurdles, and sharpened at the lower ends like stakes, and are driven into the ground; and when thus fixed and tied together with rope-yarn, these hurdles form an enclosure of sufficient strength, in which sheep are folded, and are easily removed at the pleasure of the farmer. By these means the feeder of live-stock upon turnips in the winter, easily portions off a part of a large field into which his sheep are driven by day; and when they have consumed the food in that division, the hurdles are moved every few days, until the whole crop is eaten, and the land is thus richly manured. As soon as the spring opens, the land is broken up, and sown with barley and clover; the latter is generally fed off by cattle, sometimes without any of it being mown, which is a most successful preparation for wheat.

The method of planting wheat in some parts of England would astonish even a Yankee. Sowing it broad-cast, in the section of country where the writer lived, would be esteemed a waste of grain, besides the great uncertainty of having a full crop. Drilling is sometimes practised, when haste is required; but this is not thought favorable for an abundant crop. In England, wheat thrives best in a stiff, close soil, and the more it is trodden, the better. It is usually sown upon clover lands once ploughed, in October and November. The usual method in the county with us, was by dibbling. A man has a dibble in each hand, and thus prints holes upon each furrow, at about the distance of three or four inches apart, while two or three children follow him, dropping a few kernels into every hole. This seems a slow and expensive mode; but those who have practised it, find by experience, that in the saving of the seed, and the abundance of the crop, it is the most profitable method hitherto adopted.

The barley crop in England is next in importance to the wheat, and, owing to the great consumption of beer, that article always finds a market, and the inferior quality is used for the fattening of hogs. If the grower does not obtain from three to four shillings sterling per bushel, he does not get a remunerating price for raising it; and unless he raises from forty to fifty bushels per acre, he thinks it not a crop. No produce in England pays so high a tax as barley, when made into malt. It is taxed one shilling sterling per bushel, which, of course, has to be paid by the maltster, and not by the farmer. In the collecting of this revenue, officers of the excise are appointed in every town, to see that no fraud is practised; but, owing to the temptation, it is supposed a great quantity of malt is made which avoids the scrutiny of all the government officers.

The cultivation of the hop is a large business among some agriculturists, particularly in Kent and the surrounding counties. A friend of the writer visited one grower of this plant, who cultivated one thousand acres with this vine. The raising of this produce brings into the market a large amount of labor for the working-hands, as the spade is used, and not the plough. This latter implement could not be worked, by reason of the care and attention



these plants require, as well as the nearness of the rows, and the great width to which the roots spread. This article also pays to the government as much in proportion as the malt; sometimes as much as one shilling sterling per pound.

Land being so cheap in the United States, there is a temptation to many to have too much of it; and it is even a greater evil here than in the mother-country, because labor there is at a much lower rate. A common working-man upon land in England, if he can be sure of earning nine shillings sterling per week the year round, thinks himself well off; and with the addition of what his children make, and the various other helps from harvest wages and aids from benevolent objects, he thinks himself comfortable and happy.

AGRICOLA.

*Madison, New-Jersey, February, 1852.*

#### DECLINE OF SOUTHERN MANUFACTURES.

ONE of the cotton factories, put in operation here a little more than a year ago, and worked by slaves, has stopped, and its machinery is advertised for sale; the other, whose operatives are free, still continues—some say successfully—but the conductor told me it was a losing business; labor is very high, and it is impossible for hands to do as much as in a more bracing, healthy climate.—*Mobile, Feb. 5, 1852.*

But a little while since, the planters were urged to build mills, in order that they might crush the Northern manufacturers, and the consequence has been that the competition between Northern and Southern mills has ended in the ruin of the owners of both. Had the tariff of 1842 been permitted to remain, the North would, long ere this, have abandoned to the South the manufacture of coarse goods, because that of fine ones would have been more profitable; and the planting States would now be studded with factories; and the consumption of the country would now be a million of bales, instead of half a million; and the price of cotton would now be fifty dollars a bale, instead of thirty; making a difference in the crop of the present year of MORE THAN FIFTY MILLIONS OF DOLLARS, which sum, large as it is, constitutes but a part of the tax imposed upon the people of the cotton-growing States by the tariff of 1846.

#### INCREASING THE SURPLUS OF FOOD AND DIMINISHING ITS PRICE.

"THE last Clarion paper has the sheriff's advertisement for sale at the court-house of that borough, on Monday, December 1st, of one furnace, including a grist-mill, blacksmiths' and carpenters' shops, and ten dwelling-houses, with four tracts of farm land. One other furnace, with fifteen dwellings, shops, and stores, and five more tracts of farm land attached and under improvement. One other furnace, with dwellings, mills, shops, stores, &c., with five tracts or farms of improved land. One other furnace, grist-mill, dwellings and out-houses, with three tracts of land attached, being improved farms. One other furnace, with usual necessary buildings, dwellings, shops, stores, &c., with a tract of land. At same time and place, various other lands and town lots. They have, however, this one satisfaction, that the agony, if not ceasing, is not increasing much. They sold six furnaces last court, and have six to sell this court. They will doubtless sell cheap, and that will be good for somebody."—*Pennsylvania paper.*

Every man that mines coal or ore, or makes iron, is a customer for the farmer, and aids in raising the price of the products of the farm. Every man that works in a blacksmith's or carpenter's shop, and every one employed in building mills and furnaces, is likewise a customer to the farmer; and the more numerous his customers, the larger are likely to be his prices.

Every miner driven to raise food becomes a rival to the farmer, and aids in

reducing the prices of the products of the farm. Every furnaceman, every blacksmith, every carpenter, every quarryman, and every mason, driven from the shop, the furnace, or the quarry, goes to raising food for himself and for market; and the larger the number of producers, the smaller are likely to be the prices of the farmer. Nevertheless, a large portion of the farmers of the country are engaged in closing the old furnaces, and mines, and mills, and preventing the building of new ones, with a view, apparently, to increase the surplus of food, for which we must seek a market abroad, and that at a time when prices abroad have so much diminished, that a barrel of flour is worth at Liverpool but little more than four dollars!

### LIME BURNING IN GREAT BRITAIN.

BY SAMUEL CLEGG, JUN.

Wood is seldom or never used in Great Britain for burning lime; but in new countries, or those abounding in timber, it would most probably be the cheapest fuel. The method of burning with wood will consequently be explained. The kilns may be the same as those used for coal, or "field-kilns" may be erected; their construction is expeditious and economical, but somewhat precarious.

Above an oven-shaped vault a circular tower of limestone is built, which is enclosed by a wall of beaten earth, supported externally by coarse wattling, in which care is taken to leave an opening, to introduce the fire beneath the vault. No grate-bars are necessary. The charge rests upon one or two rough arches, turned with the materials of the charge itself, as in the flare-kiln described before. Under these arches a small fire is made with faggots or logs, which is gradually increased as the draught establishes itself and gains force. All the precautions before enumerated in burning the lime hold good in this case also. The proportion of wood-fuel to lime is taken from some French kilns mentioned by M. Vicat. A "field-kiln" at the Monsieur Canal consumed 1.64 cubic yards of oak billets for each cubic yard of lime burnt. At the bridge of Souillac, a cylindrical kiln, surmounted by a cone, consumed 1.70 cubic yard of oak billets per cubic yard of lime. When faggots are used, their cubic measure is of course much greater than cord-wood for the same value of fuel, and a cubic yard of lime will require from 22.34 to 30 cubic yards of such faggots. It is the practice in some places where wood-fuel is used, and the form of the kiln is that of a cylinder or an inverted cone, to interlay the lime and fuel in the charge, first placing a layer of billets or faggots, then about 12 or 15 inches of limestone, and so on, keeping the due proportion of each; but the practice is not a safe one, as, supposing the limestone not to be perfectly calcined, the charge must be emptied, and the kiln refilled, which is expensive and unsatisfactory.

Peat is also available as fuel, and so is coke, the treatment of the kiln being with them much the same as with coal. The value of turf and peat as fuel is liable to much variation, and depends partly upon their density and partly upon their freedom from earthy impurities; the quantity required to calcine 1 cubic yard of limestone varies from 2 to 11 cubic yards. 10 bushels of coke or cinders to 18 bushels of coal-dust, the whole thoroughly moistened, will burn rapidly 112 bushels of limestone. The stone for the hydraulic mortar used at the Liverpool and Birkenhead docks is obtained from the Hal-kin mountain, near Holywell, Flintshire. When the stone is required to be

burnt quickly, coke is used, at 16s. per ton; when not required quickly, coal is used, at 8s. 6d. per ton. The stone can be burnt quickly for as little money with coke as it can be burnt slowly with coal; but it is expensive to burn quickly with coal, or slowly with coke. The proportion of coke is generally one bushel to six bushels of stone.

*Cost of Burning the Limestone.*

tons.	cwt.		s.	d.		£.	s.	d.
4	10	Limestone,	-	-	7 3 per ton,	-	1 12	7½
		Labor on ditto,	-	-	1 6	-	0 6	9
1	10	Coke,	-	-	11 0	-	0 16	6
							2 15	10½

Produce: 3 tons, at 18s. 7½d. per ton, - - - 2 15 10½

The quantity of any quicklime required for mixing with the other substances to form mortar, should be determined by measure, and not by weight, as the latter varies according to the length of time the lime has been burnt or exposed to the air, or to the quantity of core it contains; and, although these changes affect the quality in the measure, the results will be found more accurate than by weight.\*

The measures employed are yards or bushels. The yard measure is a strong square box, without top or bottom, measuring 3 feet in height and width, and containing, therefore, 27 cubic feet. A yard is occasionally called a "measure," or a hundred of lime: a single cart-load is equal to one yard. A bushel is  $\frac{1}{45}$  of a yard; and a barrow contains about three bushels.

TREATMENT OF HORSES WHEN HEATED.

MEN and horses, remarks the *New-England Farmer*, are the only animals that sweat. So say the medical men, whose business it is to investigate the wonderful living mechanism of both. The ox cools off by accelerated respiration: if heated in the furrow, he partially opens his mouth, drops his tongue, and by rapid respiration, or breathing, throws off the excess of heat which has accumulated in the system. The dog which runs at the side of the carriage through the immense heat of a July sun, dashes into the cold spring with impunity, and returns refreshed, having no perspiration to check, "when men or horses, submerged in a similar manner, would suddenly check perspiration, and if they survived the shock, it would be but to die with acute or chronic inflammation." In violent motion, the respiration of both men and horses is increased, but not sufficiently so as to carry off the heat that is generated; they perspire through the skin, the pores of which become opened or enlarged, and it is while in this condition that both are exceedingly liable to be injured, and when great care is necessary to preserve the health of either.

We saw a noble-looking animal the other day standing by the road-side, wet with perspiration, dotted with foam, and apparently highly heated. There he stood, unchecked by rein or halter, faithfully waiting his master's return. The cold was intense; the mercury being below zero! Impatiently he pawed the ice under his feet, champed the bit, and wildly flung his head

\* General Pasley says, that *weight* affords a more accurate estimate of the quantity of lime than *measurement*, but this is not correct; besides, the practical difficulties in the way of weighing lime for large works would be insurmountable.



from side to side, while his lips were contracted and nostrils collapsed, giving him a fierce and unnatural appearance. No blanket covered his wet and heated body, while the keen morning air froze stiff the moist long hairs that stood out from the skin. He was evidently suffering severely. And this is no uncommon sight. So little is still known of the physiology and functions of the horse, that the man who would refuse an extravagant price for a favorite animal, suffers him to stand in the condition which we have described. If the horse escaped an attack of colic or violent inflammation in some shape, it was his good fortune, and not from any wisdom or humanity on the part of his owner.

Even in mild weather, though it may be summer, men or horses should not remain quiet in a cold draft, when heated and wet with perspiration. Millions of the colds complained of would be prevented, by observing this simple rule, and thousands of valuable lives preserved which are now annually extinguished.

But you, who value the noble animal which you control, when you "rein up" for business or pleasure, let the mantle of charity come over your steed in the shape of a good warm blanket. Depend upon it, you will find it cheaper than physic, traveling on foot, or drawing your carts yourself.

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THE "BENIGN INFLUENCE" OF THE TARIFF OF 1846.

*Jonesville, Michigan.*

The times in Michigan are dull and hard. Wheat here, only seventy-five miles from the lake, brings forty-eight to fifty cents, and only costs ten cents to transport it there. Few will sell at these rates, and the farmers are borrowing money at from ten to twelve and a half per cent., rather than sell their wheat. . . . The crops of wheat and corn were far less extensive than usual. They were reported very large, but it is a mistake; they are not large, and the low prices paid make times quite hard.

WE give the above on high free-trade authority, the New-York *Evening Post*, a paper chiefly remarkable for its strenuous advocacy of the maintenance of British control over the manufactures and trade of the world; and we invite to it the attentive consideration of such of our readers as have permitted themselves to be blinded by Mr. Walker's promises of a great foreign market for their products. The crops of the neighborhood whence this letter was written, are stated to have been small, but the demand is still smaller; the consequence of which is, that the farmers obtain half a dollar, or even less, for a bushel of wheat, and they borrow money at one per cent. a month to enable them to store it up until the recurrence of another Irish famine; not reflecting that all Europe is now engaged in raising food of all kinds for "the great grain market of the world." But a little while since, the Washington *Union* assured its readers that the object of the manufacturers in desiring a tariff was that of having cheap food, at the cost of the farmers; but it is now beginning to be seen that what the manufacturers desired was to make a market for food. The tariff of 1842 created a market for a hundred millions of dollars of the products of the earth; and that market would, in the years that have passed since it ceased to exist, have increased to the extent of two hundred millions. The tariff of 1846 has not only prevented all increase, but it has diminished consumption to the extent of at least fifty millions, while driving into agriculture the whole increase of our population, when a large portion would have preferred other pursuits. It has thus increased the supply of food while diminishing the demand, and the result is seen in the fact, that food abounds for

which no market is to be found, and that the farmer stores it in hopes of a famine in Europe that will not come. How long will it be before the farmers and planters will learn that they it is that need protection in their efforts to bring to their sides the men who drive the shuttle and strike the hammer?

#### RESULTS OF JUDICIOUS FARMING ON A SMALL SCALE.

*To the Editors of the Plough, the Loom, and the Anvil:*

I PROPOSE, in this contribution, to give you an account of the property invested in, and the produce of a small farm of one of my neighbors, the Rev. John Perrin. I will state, without hesitation, that he is the most industrious minister with whom I ever had any acquaintance.

We have an elevated arenaceous alluvial plain, some two hundred feet above the Lamoille river, of some fifty or sixty acres, on which our village and the county buildings are located; the descent toward the river is very abrupt; our road runs east and west, or nearly so. Mr. Perrin's home farm is at the west end of the plain, and only three and a half acres level.

PROPERTY INVESTED.		PRODUCE OF FARMS.	
Home farm, 16 acres, value, ....	\$600 00	Hay, 16 tons, .....	\$96 00
Tillage, 3½ "		Corn fodder, .....	15 00
Pasture, 11 "		Corn, 125 bushels, .....	93 75
Rest, second growth.		Potatoes, 175 do., .....	43 75
Out farm, 29 acres, value, .....	500 00	Carrots, 167 do., .....	41 75
Mowing, 13 acres; pasture, 2 do.;		Pumpkins and garden-sauce, ...	10 00
hop-yard, 1½ do.; rest wood-		Avails of hop-yard, .....	190 00
land.		Dairy, .....	60 00
Stock:—pair draught-horses, ...	75 00	Pork, .....	63 00
Three-year-old colt, .....	50 00	Growth of stock, .....	20 00
Three cows, \$75, three calves, \$15,	90 00		
Farming implements, .....	100 00		
	<hr/>		<hr/>
	\$1,415 00	Net produce, .....	\$633 25

The pasturing of the stock is not included in the produce of the farms, which is not less than \$30. Mr. Perrin is 44 years of age, and has paid out for labor on his farm, last season, the sum of \$60.

Mr. Perrin has a barn with so many conveniences, that I am disposed to call it a model barn, of which I will give you a description. The barn is located on the slope of the plain, and the sand scraped away, and the site made level. It is 36 by 40 feet, 22 feet posts, and 16 in number. They stand on pillars of stone and brick, laid in lime cement; the sills enter the posts seven feet above the foot of the posts—three stories. The basement is seven and a half feet in height, with a plank floor over the whole, 26 by 36 feet; the planks are laid in clay-mortar, spread on the ground, three inches deep; also a plank edgewise, fourteen inches wide, laid in clay-mortar all round this vat, which is water-tight, to receive and retain the manure from the stables above. The remainder of the basement is 26 by 14 feet; the planks are elevated on sleepers, and rest on the edge of the vat, and slope toward the vat, and project over the edge of it three inches. The first ten feet from the vat is divided into three pens, for swine, calves, or a cow; with a tight floor, to convey all the droppings into the manure-vat. The remainder is a walk and stairway to the second story; a door at the north end of the alley gives ingress from the yard, for any animal wished to be confined in one of those pens; the swine are allowed to be in the pen or vat as they please, and it can be used as a yard for the cows in the summer season. Under these

pens is a cellar for potatoes, carrots, &c., and trap-doors in the walk to enter the cellar. There are two girders between the bottom of the posts and sills; it is boarded upon the posts to the upper girder, and filled in with bark from a tan-yard, all round the basement, except two doors for ingress and egress, with a team conveying muck, or removing manure. The entrance into the second story is on the east end of the barn, from a wharfing twelve feet distant, bridged over, and serves for a shed for the stock; the grade is very gentle; a plank floor over the whole of the second story, cow-stable on the south side, and horse-stalls on the north. The rest of this story is a floor to drive on into the barn, and store wagons and other farming-tools, or for a bay, if needed. The fluids and droppings of the stock are conveyed into the vat beneath, by trap-doors in the floor. The next story is scaffolding on two sides and west end; the large doors all hang on rollers at the top. The barn is double boarded all round, jets on the gable-ends, and all well lighted with glass. (See the accompanying diagram.)

THIRD STORY SCAFFOLDS, NORTH AND SOUTH SIDE, AND WEST END.

WEST.				WEST.					
Stables.	Second Story Barn Floor.	Horse Stalls.	Bay, or place to put Farming Tools in.	NORTH	SOUTH.	Door.   Basement Story.	Vat, with temporary fences to separate the swine, &c.		
								Door.	Door.
Stairs.	Door.					Stairs.	Walk.		
						Walk from Vat.	Pen for Shoats.	Pen for Hogs.	Pen for Sow, or Cow-pen.

Mr. Perrin improves every opportunity for making manure. Sods, the wash of the ditches, weeds from the garden and fields, are thrown into the vat. He realizes more from his farm, according to size and quality, than any one in the vicinity, *barely* by a thorough and *judicious* cultivation. His home farm, *as he calls it*, is a light, sandy soil, with only three and a half acres level; the rest is narrow swales, or steep side-hill, not yielding a good crop of grass, but is used for pasture-land, on account of its unevenness; such land does not yield well without extra culture. His out farm is moist land, and good for grass, and yields a good crop.

ARIEL HUNTON.

*Hyde Park, Vt., February 15, 1852.*

**THE CHINESE OPIUM TRADE.**—Rev. Mr. Bridgeman, writing from China, says that the number of chests of opium, each containing 133 lbs., taken to China the present year, will exceed 70,000, and that, in exchange for these 70,000 chests, the Chinese will pay to foreigners more than \$36,000,000, and most of this in silver.

This opium is smuggled, and it was to obtain the power thus to demoralize and poison a whole people that England battered down the cities of China and massacred their inhabitants.



## PROSPERITY.

IMPROVEMENTS IN NEW-YORK.—The New-York *Evening Post* states that whole rows of new houses in the upper part of the city are now standing, unsold and untenanted.

We are told by all the advocates of *British* free trade that the nation is highly prosperous, but when we come to inquire for that prosperity, it is no where to be found. The planter sells his cotton at thirty dollars per bale, when he might have fifty, had he permitted the domestic consumption of cotton to grow as it grew under the influence of the tariff of 1842. The Illinois farmer obtains fifty cents for his wheat, when he would be receiving a dollar or a dollar and a half, had he not closed the mines and furnaces, and driven their occupants into agriculture, to become competitors with him for the sale of wheat, instead of competitors for its purchase, as they desired to be. The merchant complains that the past year has been one of constant loss. The ship-owner would be ruined, were it not that *British* free trade is depopulating Ireland. The producers of cloth and of iron are already ruined; and now, to cap the climax, we are informed upon the highest British free trade authority, that in New-York, which was to be enriched by the adoption of measures that should insure to Great Britain her control over the manufactures and trade of the world, whole rows of new houses are "standing, unsold and untenanted;" and so, as we think, they are likely to remain. The city lives by the prosperity of the country, and, when the planter and farmer are being ruined, trade will not justify high rents. It is time that the people of the city and the country, of the farm and the plantation, should learn that there is a perfect harmony of interests, and that it is impossible to build up a great foreign trade upon the ruin of the vast domestic one.

## PRUNING APPLE TREES.

THIS is a subject in regard to which much discussion has been elicited, and much diversity of opinion still prevails, particularly in regard to the best time for doing it. But the fact that it is always beneficial, *if properly done*, let the season in which it is performed be either in the spring, summer, autumn, or winter, proves that more depends on the *manner* of pruning than the time of the operation.

We consider the early spring months, and late in the fall, the best seasons for pruning apple trees, as the sap is not at these seasons flowing, and less danger is to be apprehended from injury to the tender branches in consequence of being bruised by the ladder or the feet of the operator; and also more desirable from the fact that the bark very soon closes over the wood and protects it from decay. The *method* taken by the farmer we consider of more importance than the time, and therefore confine ourselves more particularly to this part of the subject.

A writer, in regard to pruning, remarks: "Sometimes a farmer will mount an apple tree with an axe, and cut off one fourth or one third of its head, even branches that are from four to six inches in diameter. He says: 'I don't often prune, but when I do, I do it right!' In this he errs. We have never seen a tree thus pruned do any good afterwards, especially if it was a full-grown tree. Such pruning entirely destroys the equilibrium between the branches and roots; consequently the power of attraction in the

head is too weak to keep up a proper circulation of the sap. Besides, those large wounds never heal over."

The most appropriate and the only really suitable instruments for pruning, are the saw and knife. An axe should never be used, unless the removal of dead wood requires it. The knife should be perfectly sharp and the saw fine, that a smooth surface may be left after the removal of a branch; and no portion of the vigorous tree larger than two or three inches in diameter should be removed, as the bare wood thus exposed presents a surface too broad to be covered with new bark, and consequently will soon begin to decay. It is better to prune sparingly, and prune every year or twice a year, judiciously selecting such branches as require removal, than to do it at long intervals, and deprive the tree of too large a portion of its top at once, particularly in the summer season, as the removal of much foliage will then deprive the tree of its vigor and check its growth.

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#### A NATIONAL UNIVERSITY.

MESSRS. EDITORS:—Many of the readers of *The Plough, the Loom, and the Anvil*, are no doubt aware that much has been said of late relative to establishing a National University, founded on a plan so that all the sciences and arts will be taught, and so instituted that each senatorial or assembly district will be entitled to send one of its best students; his tuition to be paid by the district sending him, and thus enabling him to be educated in all the higher branches at the expense of the State or nation. The writer lately attended a meeting which was held in the city of Albany for the purpose of proposing plans, &c., for the establishment of a university, national in its character, to be located in that city, and to be conducted by ten or fifteen professors of the first order, who are to instruct students from different parts of the State in all the sciences of the day, and thus produce scholars who will shine as brightly as any who ever graduated from the higher institutions of Europe. The meeting was numerously attended, and addressed by some of the most distinguished scientific men of the nation.

Amongst the speakers who advocated the establishment of an institution on the plan proposed were Professors Bache and Pierce—both eminent as men of science, and of profound talents. They spoke at length of the vast amount of good that would result from the establishment of a university national in its character, and went on at some length to speak of the condition and thrift of European institutions; what profound scholars they had produced, and how we might accomplish the same results they have attained, if we would only become energetic, and employ the means we have in our hands for carrying out the plans which they urged. The professors alluded to the different studies which should be pursued in the institution, and the kind of apparatuses which should be connected with the university, in order to make it popular, and at the same time effectual in infusing the right kind of ideas into the minds of those who should attend it. *Scientific agriculture* was frequently spoken of in the course of the remarks, and the speakers stated that this science would form one of the most prominent features in the proposed institution. Prof. Pierce named several eminent persons who had expressed their willingness to become instructors in the university, and stated that if the people of the State of New-York did not embrace the present opportunity in carrying out the plans of the college, they would, perhaps, never meet with a like chance again.

Other gentlemen made remarks favorable to the plans proposed by Pro-

fessors Bache and Pierce. Governor Hunt spoke briefly on the subject, and thought such an institution would be the means of changing the character of our people, and of elevating and improving the minds of many young men.

The university which is now in operation in Albany lacks means and students, and what it wants is the patronage of the State. With this, it would at once no doubt become one of the best institutions in the world. There is no good reason why we cannot afford as good an institution of learning in America as can be found in Europe. We have the talent, we have the means, and we have energy and perseverance. Set these things in motion, and obtain a substantial charter from the State, and an institution of a deservedly high character will at once be established.

Baldwinsville, N. Y., Feb. 22, 1852.

W. TAPPEN.

#### HOW THE TARIFF OF 1846 AFFECTS MAINE.

"TEN years ago, the town of Houlton, Me., the county-seat of Aroostook county, the extreme north-eastern section of the State, was in a very thriving condition. The village, situated in the midst of vast forests, was very pleasant and flourishing. There were stores, taverns, one or two church edifices, &c.; several hundred United States troops were stationed there, and all was life and activity. But recently, since the settlement of the North-eastern Boundary Question, the quiet ensuing the withdrawal of those troops, the decline of the lumbering business, and the failure of the crops for several successive seasons, the town is dying out, and may now be said to be dead. The churches are closed, and almost every body is moving away.

"What is true of Houlton is also true of all the towns in the county. The region is too far north for corn, and for wheat and potatoes they raise there is no market; and though a good farm may be had for \$150, the whole county is likely to become depopulated."

Under the tariff of 1846, Canada supplies us with our lumber, and Britain with food in the forms of cloth and iron; and while one portion of the population of Maine abandons the clearing of the land, another abandons the working of it, because, with the closing of the mills and furnaces of the State, there has ceased to be a demand for potatoes, of which the earth yields largely, but which are therefore too bulky to carry to a distant market. On a recent occasion, we noticed that of a large number of persons waiting at one of the ports of the Pacific for a passage at San Francisco, more than one third were from Maine. Depopulation and weakness are every where the results of the separation of the plough and the loom.

#### SELECT ROSES.

COMMUNICATED FOR THE PLOUGH, THE LOOM, AND THE ANVIL.

THE editor of the *Horticulturist* gives the following as the best dozen of hardy ever-blooming roses: *Perpetuals*—Madam Laffay, Giant des Batailles, Baronne Prevost, William Jesse, La Reine, Duchess of Sutherland, and Ambernon. *Bourbons*—Madame Desprez, Bouquet de Flore, Souvenir de Malmaison, Pierre de St. Cyr, Mrs. Bosanquet. A dozen best roses for pot-culture, are the following: Saffrano, Princess Marie, Souvenir de Malmaison, Devoniensis, Comte de Paris, Mrs. Bosanquet, Eugene Beauharnais, Niphe-los, Queen of Lombardy, Hermosa; and for larger pots, branches to be trained, Solfaterre, and Cloth of Gold. The best hardy climbing roses for the most Northern States are: Boursault Elegans, Blush Boursault, Queen of the Prairies, Baltimore Belle, Superba, and Eva Corinne. Wiegela Rosea is, so far as tried, hardy all over the north.

When we consider the ease with which the climbing roses can be propa-



gated, either by cultivating or layers, and their rapid growth, (frequently making shoots, in good soil, of from twelve to fifteen feet in a season,) and also the great number of beautiful flowers that they bear, we are surprised that more of our cottage-homes are not adorned with them. We have in our own garden the Queen of the Prairies, raised from a small layer, four years ago, which, for the last two seasons, has borne from eight hundred to one thousand beautiful blooms. If you have but a small space to cover, and would like a variety, the above may be budded with Globe Ayrshire, (Ruga,) color white, with delicious fragrance, and with Rupelliana, (Multiflora,) purplish crimson.

R. L.

Brooklyn, N. Y., February, 1852.

#### SETTING KETTLES FOR BOILING FOOD.

THE importance of cooking food for fattening animals, says the *Rural New-Yorker*, having been conclusively settled, and now universally admitted, the cheapest and most economical manner of performing this process, as relates to the consumption of fuel, is worth the inquiry. Some over-particular persons, in constructing a furnace for this purpose, build a spiral flue around the caldron, on the supposition that the longer they can keep the heat in contact with the kettle, the more economical. This form of construction is bad; it destroys the draft, and renders the fire black and sluggish; and to form the spiral draft requires so much masonry to touch the kettle, that not more than one half the surface is in contact with the heat, and therefore is lost as a conducting agent.

It is not advisable to set a caldron capable of containing less than sixty gallons, and if ninety gallons, or three barrels, the better.

In laying out the plan for the brick-work, take the diameter of the kettle at the largest point; add to this twelve inches for a six-inch space on each side; and to this, twice the thickness of both walls; and, in the direction that the flue or arch is intended for receiving the wood, add two feet, so that the structure shall be two feet longer than its width.

Kettles now-a-days have a projecting flange at the top, and two horns to rest them upon the brick-work. By means of chains or ropes, suspend the kettle over the exact point where it is intended to be fixed—its bottom at the right distance from the bottom of the fire-pot, to allow a proper quantity of wood to pass under—then carry up the walls to the height of the mouth of the arch, which is to be in one end of the longest direction of the furnace. At this point, place some iron bars over the arch and one across, near to that side of the kettle, and lay over the arch, and up to the kettle, and half way round it, two courses of bricks—touching the kettle at a point where the sides commence rising—by which arrangement the fire is made to impinge against the centre bottom, and, passing past the centre, returns around the sides, and passes up the chimney over the mouth of the arch. The structure is then complete by bringing the walls to the height of the kettle, gathering in towards the top, so that the entire flange rests upon the brick-work.

By this construction it will be seen that the fire strikes against the bottom, and passes up the end, and back around the whole body of the boiler, not injuring the draft, and brings the blaze in contact with the entire surface, except where the two thicknesses of bricks touch it over the arch.

A seven or eight-inch pipe, of which a cheap, second-hand article can

always be procured, answers all the purposes required for a chimney, and costs less.

A smaller kettle, fitted with a steam-pipe and a steam-chest, is probably altogether the most desirable method of cooking food for animals; but its preparation in proper and substantial manner involves an expense of fixtures, an outlay that but few farmers are willing to encounter, for merely fattening the animal for household use.

#### WASTEFULNESS OF THE BRITISH SYSTEM

THE gold discoveries in Australia have induced serious propositions for the establishment of a mint in that distant colony. As much as a quarter of a million sovereigns have already been transmitted, partly as returns for the gold which has arrived here, and partly for prospective purchases of the metal on advantageous terms. Under these circumstances, the propriety of establishing a mint either at Sydney or Port Philip is deemed indispensable. *Any thing more wasteful, looking at the risk and loss of interest it involves, than the shipment of the metal backwards and forwards, in the shape of rough gold from one side and coined pieces from the other, can hardly be imagined.*

The above constitutes one of the items of intelligence by the late arrivals from Great Britain, and we desire particularly to call to it the attention of such of our readers as deem it not wasteful to send to England the food of Iowa and Illinois, and the cotton of Mississippi and Alabama, there to be converted and stamped, and returned to the place of production. The planter sends away *five bales* of cotton, and *one bale* comes back to him in the form of cloth, whereas, for every one hundred dollars' worth of gold sent from Australia, ninety would be returned in the form of coin; and yet, to save this ten per cent., it is deemed most wise to establish a mint in Australia, whereas it is deemed unwise in the planter to attempt to save his eighty per cent. by bringing the spindle and the loom to take their places in the cotton field.

#### PRACTICAL RESULTS OF BOOK FARMING.

MESSRS. EDITORS:—While one cannot help noticing, in all parts of the country, some farms which appear to be growing worse and worse every year, it is gratifying to be able to recognize many that are improving. In these days of progress, it is hardly consistent for the farmer to be "lying on his oars," while all the rest of the world are advancing. There is no good reason why the farmer should not "go ahead;" the means are within his reach, if he will only avail himself of them.

While there are such pioneers in the cause as a Carey, Norton, Lee, a Mapes, and many others, why should the farmer not follow their teaching? There is no reason that I can see, unless it is the farmer's own wilfulness. That the majority of farmers do not improve much, is but too evident. There are honorable exceptions, however, and the most stubborn sometimes fall in by the power of example, and without the least possible idea that they are becoming "book farmers." Is not example, then, the best method of teaching them? I have noticed, where there was a good farmer in a neighborhood, one who made himself acquainted with the improvements of the day, and adopted them understandingly, his immediate neighbors would fall in with him in process of time, and adopt the course of what they term the "lucky farmer."

I know a farmer who, for a great number of years, followed the system of summer fallowing and sowing wheat upon the same land every other year,

until the amount per acre was reduced to about fifteen bushels. This was upon the very best kind of soil for wheat, but he was convinced that the system was a bad one, as his crop was less and less every year. About this time, he concluded to take an agricultural paper. Well, he found in it an article upon deep ploughing for wheat, and he immediately adopted it. He altered his plough so that he could put it in up to the beam, and put on to it two yoke of large oxen and a pair of good horses, and ploughed his ground twelve inches deep. The field contained twelve acres. The last crop under the old system, with ordinary depth of ploughing, was about fifteen bushels to the acre; his crop after the twelve-inch ploughing, with the same cultivation otherwise, was within a fraction of *fifty bushels* to the acre. The result was beyond all expectation. I need not add, that this example has produced wonders in that immediate neighborhood.

Very respectfully, yours,

Detroit, Mich., Feb. 13, 1852.

A. C. HUBBARD.

#### DIMINISHED PRODUCTIVENESS OF AGRICULTURE, A CONSEQUENCE OF THE SEPARATION OF THE PLOUGH AND THE LOOM.

For five years past, the object of our whole system has been that of closing the mills, mines, and furnaces, and driving the whole increase of population into the production of food and cotton, under the mistaken idea that we could find abroad a market for food capable of indefinite extension; and yet the foreign market now absorbs less food than it did five years since. Nevertheless, the prices of some commodities have been higher than they were before, a consequence of greatly diminished production. We now produce less wool than we did in 1846, and we have less pork and beef to sell; and the quantity diminishes from year to year, as will be seen by the following statement of the quantities passing over the New-York canals:

	1849.	1850.	1851.
Wool, pounds, . . . .	12,731,402	11,986,000	10,527,408
Pork, barrels, . . . .	73,935	46,618	45,013
Beef, " . . . .	105,492	87,259	77,793

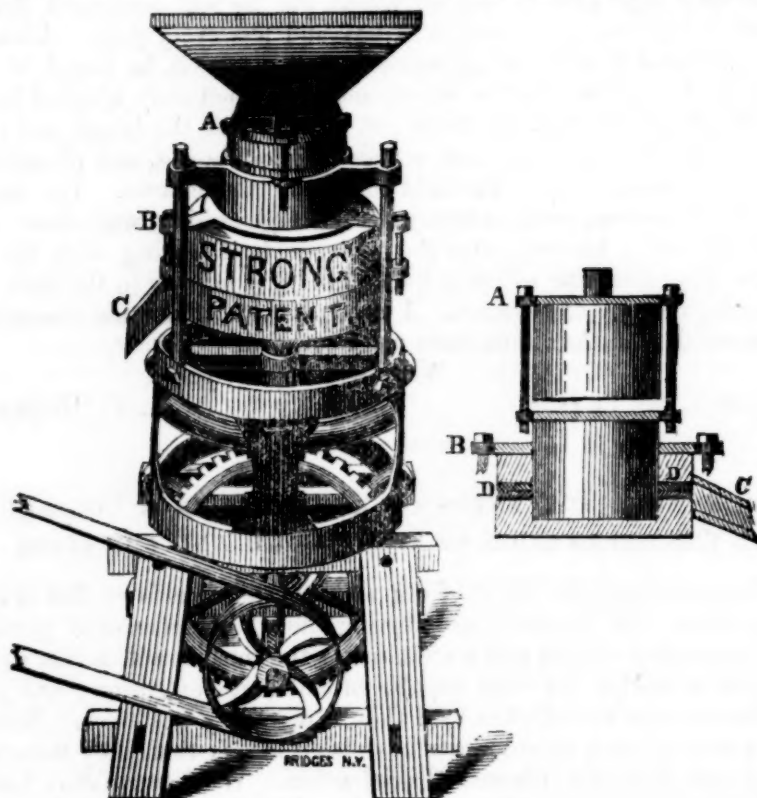
What are the prospects for pork in the next year, may be seen from the following statement:—

The correspondents of the Baltimore *Price Current* write: in Terre Haute the cutting season is closed, and the crop there will be 5000 short in weight, and 10,000 in number; \$4 50 paid for small lots. Letters from Cincinnati affirm that the packing in the West will fall 250,000 short of last season, and that the gain in weight is all a mistake, not more than one fifth of an excess in this respect being now calculated upon. St. Louis, Dec. 31.—The crop of hogs in all this region *will probably fall short of last year at least one third in weight*, consequently more than that in number. On the Mississippi river the crop will be *about one half short in number*, and on the Illinois one third in number.

Throughout the world, and in all ages, agriculture has become *more* productive, and the land-owner has become rich, as the spindle, the loom, and the hammer came to take their natural places by the side of the plough and the harrow, as was here the case under the tariff of 1842; and throughout the world, and in all ages, agriculture has become *less* productive, and the land-owner has become impoverished, as the loom and the plough became separated, as is here becoming the case under the tariff of 1846.



## STRONG'S IMPROVED PATENT RICE-HULLER AND POLISHER.



THE above engraving represents an improvement in rice-hullers, which has been highly recommended by all who have tested its merits. Three screws, A, regulate the stones for hulling, which should be about one fourth of an inch apart. Three other screws, B, regulate the polisher, the teeth of which should nearly touch each other, as represented by D. C is the spout. The machine will bear a speed of from three hundred to one thousand revolutions per minute, and will clean from four to ten bushels per hour, according to the quality of the rice. Once through the machine completely finishes it, and all that is requisite after, is to blow off the hulls and dust from the rice. No screens or brush are required for home use. The weight of the machine is about four hundred pounds; it measures three by four and a half feet, and all the strength that can be put into so small a compass is given, to make it durable. We have had frequent inquiries for an effective rice-machine; and from what we have seen of the operation of the above, we think it fully realizes what is claimed for it by the inventor, and will meet the wants of our Southern friends. The machine is boxed and delivered here at one hundred dollars. Mr. S. Dunn, 197 Water street, New-York, is the general agent for this city.

THE WHEAT CROPS.—We are informed, says the last *Abbeville* (South Carolina) *Banner*, by many of our farmers, that the late freezing weather we have passed through has materially damaged the young wheat, and fears are entertained of a short crop. If this proves so, it will be a calamity our district is illy prepared for, and must necessarily increase the price of provisions, already too high.

## HOW THE TARIFF OF 1846 PROTECTS AGRICULTURE.

UNDER the tariff of 1842, we raised our own linseed, and made our own oil. Under that of 1846, we have closed a large portion of the oil-mills, and most of those that remain are supplied with raw material from abroad, as will be seen by the following statement of the amount of linseed imported into the United States during the last five years:—

	Bushels.	At Boston.	At other places.	Total.
1847, . . . . .	"	35,720	17,334	53,054
1848, . . . . .	"	92,542	21,216	113,758
1849, . . . . .	"	80,342	5,528	85,870
1850, . . . . .	"	102,779	5,587	108,366
1851, . . . . .	"	162,790	7,243	170,033

## WORK FOR MARCH.

THIS is a busy month for the farmer and gardener in the Middle States, especially for those who prefer being ahead of their work. Manure, if not already got out, should be placed in small heaps, at convenient distances, and slightly covered with charcoal or plaster; when these cannot readily be obtained, some soil thrown over it will prevent the escape of the ammonia. As soon as the frost is quite out of the ground, use the roller on winter grain; but, if winter-killed, use the harrow, and sow with clover or spring grain. Prepare hot-beds for tomatoes, cauliflower, lettuce, &c.; cover them at night with mats. Towards the middle of the month, if the weather prove mild, the plants that have stood in cold frames during the winter may be set out. Prune grape-vines; plant cuttings of the grape, gooseberry, and currant as early as possible; all the buds of the gooseberry and currant should be removed, except three or four at the top. Grape-cuttings should be planted at an angle of about forty-five degrees, and the upper bud level with the surface; if about half an inch below, it is as well; keep the soil loose about them, and as soon as the weather becomes very hot, place a little straw or litter about them. Strawberry-beds should be cleaned and forked up; and raspberries that have been laid down may be uncovered, and cut back to three or four feet, according to the strength of the cane. Loosen the soil about the grape-vines, and fork in some good compost. Sow seeds of thyme, sage, savory, &c.

## NEW BOOKS.

## HARMONY OF INTERESTS, AGRICULTURAL, MANUFACTURING, AND COMMERCIAL.

THIS great work on political economy, from the able pen of HENRY C. CAREY, Esq., and originally published in numbers in *The Plough, the Loom, and the Anvil*, has passed through a very large American edition, many copies of which have found their way into several countries of Europe.

In the "HARMONY OF INTERESTS," the author devotes himself to a full examination of the laws which govern production and consumption, and the effect of protection in increasing capital, production, exchanges, and the reward of labor. He enters into a commercial history of our country for thirty years past, and under the various tariffs and changes which the tariff has undergone, he presents a mass of facts which demonstrate clearly the necessity and beneficent results of a protective policy. If we may attempt a brief statement of the author's views, they may be thus expressed: A protective tariff increases production and consumption, the demands for and the means of transportation, both internal and external, and accelerates the immigration of laborers.

from abroad; shipping grows with protection, because protection causes demand for labor; the laborer must be imported; and men being, so to speak, the most valuable commodity, the cost of sending the less valuable to market is diminished; in other words, the producer and consumer being placed side by side, each has a better reward for his labor, because the cost of transportation to market becomes greatly reduced. Or, as the author himself observes: "Between the interests of the treasury and the people; the farmer, planter, manufacturer, and merchant; the great and little trader and the ship owner; the slave and his master; the land-owners and laborers of the Union and the world; the free trader and the advocate of protection, there is perfect harmony of interests; and the way to the establishment of universal peace and universal free trade is to be found in the adoption of measures tending to the destruction of the monopoly of machinery, and the location of the loom and the anvil in the vicinity of the plough and the harrow."

A new edition of the *Harmony of Interests*, with a steel engraving of the author, has just been issued by the Publisher of *The Plough, the Loom, and the Anvil*, who is now ready to receive orders for the work. It forms a book of nearly two hundred and forty pages, and is offered at the following low rates:—

Bound in cloth, with a steel engraving of the author, . . . . . \$0 75  
 " " paper, plain, without engraving, . . . . . 50

A liberal discount from the above rates will be made to the book trade, and others who purchase by the quantity. Persons ordering single copies by mail can enclose the price in a letter for double rates of postage only. They should also enclose ten cents additional in money or stamps, to prepay the postage on the book, which must be paid at the office when mailed.

All orders should be post-paid, and addressed to

MYRON FINCH, New-York.

*The Fruit Garden: a treatise on the Propagation, Transplanting, Pruning, and Training of Orchard and Garden Trees, as Standards, Dwarfs, Pyramids, Espaliers, &c., the laying out and arranging different kinds of Orchards and Gardens, &c., &c.* Illustrated with upwards of 150 figures. By P. BARRY, of the Mount Hope Nurseries, Rochester, N. Y. New-York: Chas. Scribner. Price \$1.25.

We do not recollect ever to have perused a work on the above subject, that has given us so much satisfaction; every thing connected with the raising and pruning of fruit trees is treated in that practical manner which those who know the position Mr. Barry occupies in his profession, were prepared to expect. The raising of dwarf apple and pear trees, which is now causing so much attention, is very fully treated of, and we would strongly recommend our readers who have only a few trees, to avail themselves of the valuable information contained in its pages. To those who are more immediately engaged in fruit culture we should deem it indispensable.

*The American Journal of Science and Arts.* Conducted by Profs. B. Silliman, B. Silliman, jr., and J. D. Dana, aided, in the departments of Chemistry and Physics, by Dr. WALCOTT GIBBS. Second series; No. 37. January, 1852.

This truly valuable scientific journal stands foremost on the list of the most distinguished publications in this country. The ability of its talented editors and numerous correspondents is conspicuous in all its various departments of Chemistry, Physics, Mineralogy, Geology, Zoölogy, and Astronomy; and the mass of deeply interesting and purely scientific information with which its pages abound, renders it one of the most ample and valuable sources of scientific knowledge and discovery now published. The fact that British and continental publications of the highest reputation copy freely from this journal, is one indication of its true merit. Its distinguished conductors have been long and favorably known to the public, and their reputation has been well earned. The present number commences the thirteenth volume of the new series, the first twelve of which may be obtained (unbound) of the publishers, also a *very few* sets of the first series of fifty volumes complete. We allude to this as a fact of much interest to many who, we doubt not, will be glad to avail themselves of the opportunity to procure a complete set of the whole publication; the value of which, if not at the present time, will a few years hence be properly appreciated. The work is published at New-Haven, by the editors, at \$5 per annum. The back volumes by the full set, either of the first or second series, will be furnished for \$2 each.



## EDITORS' JOTTINGS.

**TREATMENT OF LONG MANURE.**—Professor Mapes, in referring to this subject, recommends, if any unfermented organic matter is at hand, such as peat, muck, swamp-mud, river-deposits, woods-earth, or even headlands, to compost the long manures with these, and thus benefit by the fermentation to decompose the more inert portions, while the valuable gases that are disengaged will be absorbed by the inert portions. At the lowest point of the heap, sink a hogshead or cistern in the ground to receive the drainage, which may be thrown back on the top of the heap once or more each week, to prevent fire-fanging. Should you ever find the cistern empty, fill it with water, and throw that on the heap, renewing the quantity until the drainage becomes sufficient to fill the cistern in three or four days after returning its contents to the top of the heap. If you have not a shed, cover the top of the heap with organic matter of some kind, or with charcoal dust, to absorb the rising gases.

Those who will continue to ferment long manures alone, should at least put them under cover, and never permit them to become dry.

Long manures may be ploughed in during the fall, provided the ploughing be sufficiently deep, and they will keep better than in an open barn-yard, for then they have the absorbent powers of the superincumbent soil to receive their gases during their decomposition. Nor can the escape of gases be material during winter, for the low temperature is not favorable to such loss.

The spring ploughing will find the manure tender, if not fully short, and more land will be rendered fertile than if the same amount of manure had been exposed for the same time in the barn-yard, and ploughed in during spring. Soils overlying long manures will be found ready for early tillage.

**METHOD OF ICING CAKE.**—After the cake is well baked and removed from the pan, dredge that portion which came in contact with the tin with wheaten flour, and carefully wipe it off. This will remove any grease that may adhere to the cake, and secure the adhesion of the icing. Let this be prepared by beating the whites of eggs until reduced to a foam; then add powdered loaf-sugar until the mass is of the consistence of thick paste, beating the whole well together. With this preparation spread the cake evenly over the top and sides of the same, (reversed,) of the thickness required, occasionally dipping your knife-

blade used in spreading it, into cold water during the operation. Place again the cake in a warm oven, and let it remain until the icing hardens, but not long enough to discolor it. When ornamented icing is required after the groundwork is completed, take an additional quantity of the same preparation, and color with any coloring ingredient (not poisonous) that you choose; then, using a small tin or paper funnel, trail the colored icing in such ornamental forms or figures as your fancy may dictate, and place, as before directed, the loaf in a warm oven to harden the frosting. If carefully and skillfully performed, the effect is very agreeable.

**SINGULAR DEATH OF A DOG.**—A dog belonging to Edward W. Lyon, Esq., of Morrisania, N. Y., came to his death a few nights since, in a singular manner. He wore a brass collar on his neck, and in attempting to jump over a picket fence, the collar caught on one of the pickets, and in that position he was found in the morning, suspended by the neck, cold and stiff. He was a large, noble animal, of the Newfoundland species, and a great favorite with the family, who sincerely regret his loss.

**REMEDY FOR SCARLET FEVER.**—The following cure for this malignant disease has been communicated by a physician (Dr. William Fields, of Wilmington, Del.) to the editor of the *Delaware Republican*. As the disease is fearfully prevalent in some portions of the country, we cannot better serve our readers than to give the recipe. The writer states that it is applicable in all stages of the disease, and will not fail to cure nineteen cases out of twenty, if strictly attended to. Although apparently simple, it is said to be a sovereign remedy, and may save many of our little ones from a premature grave, which is almost sure to follow the use of calomel, which universally tends to increase the disease instead of curing it. Treatment as follows: Give a mild cathartic, such as castor-oil or some gentle pills, every two or three days, and when there is fever present, sponge the body with weak ley, and give some simple tea to promote a perspiration, such as catnip, sage, balm, &c.; and for the putrid symptoms give good brewer's yeast, mixed with cold water; one tablespoonful of the former to two tablespoonfuls of the latter, for children ten or twelve years old, and younger ones according to age; to be repeated from three to five times a day.

and use as a gargle yeast and cream or milk, equal parts, sweetened with honey, and gargle the throat and mouth frequently with it; and if the throat is much swollen, poultice with yeast and pulverized slippery elm; continue the above treatment until well. I know, by many years' experience, says Dr. Fields, that this is the best and most effectual cure for the scarlet fever.

**BARNUM'S AMERICAN MUSEUM.**—P. T. Barnum, manager and proprietor; John Greenwood, jun., assistant-manager. Admission to the entire Museum and performance, 25 cents; children under ten years, 12½ cents. The curious attractions of the Museum, in the way of wonders in art and nature, are truly unequaled in numbers, value, variety, and interest, by those of any collection in America. There are seven spacious saloons, filled with costly and novel objects of curiosity in natural history, statuary, painting, &c., located on the corner of Broadway and Ann streets, New-York. We can confidently recommend the attractions of the American Museum to those who would enjoy rational amusement combined with instruction. The performances are always entertaining, and devoid of any immoral tendency.

**THE CAUSES OF ACCIDENTS ON RAILROADS.**—The following analysis of the accidents occurring on railroads from causes which may be avoided by proper care on the part of the passengers, is taken from a work recently published in London, entitled "Lardner's Railway Economy." Its publication ought to have a good effect in this country:

**ANALYSIS OF ONE HUNDRED ACCIDENTS PRODUCED BY IMPRUDENCE OF PASSENGERS.**

	Killed. Inj'd. Total.		
Sitting or standing in improper positions, - - - -	17	11	28
Getting off when train in motion, - - - -	17	7	24
Getting up on train in motion, - - - -	10	6	16
Jumping off to recover hat or parcel, - - - -	8	5	13
Crossing the line incautiously, - - - -	11	1	12
Getting out on wrong side, - - - -	3	3	6
Handing an article into train in motion, - - - -	1	0	1
Total, - - - -	67	33	100

The incautious railway passenger may derive a salutary lesson from this table. He will see from it that two thirds of the accidents resulting from imprudence are fatal to life, and that nearly seven of every ten of such accidents arise from sitting or standing in an improper or unusual place or position, or from getting on or off a place while the cars are in motion. This latter circumstance should be most guarded

against, for it is a peculiarity of railway locomotion that the speed, when not very rapid, always appears to an unpractised passenger to be much less than it is. A railway train moving at the rate of a fast mail-coach, seems to go scarcely as fast as a person might walk.

**FORMATION OF AN AGRICULTURAL SOCIETY.**—A letter from General John H. Keim, received at this office, and dated Reading, Berks county, Pa., Feb. 7th, contains the following paragraph:

"We have recently formed an Agricultural Society in our county, and purpose having an exhibition next October, which, I anticipate, will have a good effect upon our farmers.

**STEAM DRILLING MACHINE.**—Mr. Joseph J. Couch, of Massachusetts, some time ago perfected an admirable machine for drilling rocks, by the aid of steam-power. The machine has been in very successful operation upon some of the railroads in the Middle States. He has now made a decided improvement in it, dispensing with the gearing, and applying the steam directly to the operation of the drill. It is altogether a most ingenious and effective machine. It can be operated at a very small expense, and will do at least the work of twenty men. It will be invaluable, says the *Boston Post*, in railroad construction, or in any heavy rock-cutting; and so sure and economical is its operation, that the Hoosac tunnel itself would almost fade into insignificance before it. A model of this improved machine, we understand, has been examined and highly approved by some of the most skilful engineers and scientific men in the country.

**ANNUAL CATTLE SALE.**—Lewis G. Morris, Esq., of Mount Fordham, New-York, is making preparations for his annual Cattle Sale, which is expected to take place in June. Mr. Morris will not have another sale in two years, as he expects to be absent in Europe, making selections to add to his already excellent stock. Mr. Morris has done much to improve the breed of farming stock, and, if spared to carry out his present arrangements, our country will be still further indebted to his efforts for one of the most important improvements in farming.

**INCREASE OF THE IRON TRADE IN ENGLAND.**—In the year 1750, the entire quantity of pig-iron manufactured in Great Britain was only 30,000 tons per annum. It has now attained the enormous amount

of two and a quarter millions of tons, being an average increase of 22,000 tons yearly.

The exports of iron during the past four years have been as follows, viz.: In 1848, 657,005; 1849, 729,164; 1850, 808,262; 1851, 912,655.

At the commencement of the year 1851, the demand for Welch bars increased very rapidly, particularly for the American market, and extensive orders were taken at prices ranging from £5 1s. to £5 7s. 6d. per ton; but the prices fell off from midsummer to September, when orders were effected at an average of £4 12s. 4d. per ton. The market since has been exceedingly dull, and at present remains very inactive. The manufacture of railroad iron is carried on very extensively in several parts of the kingdom. From an inspection of the most of the rolling mills in South Wales, it has been satisfactorily estimated that 10,000 tons of finished rails are turned out weekly; and at the ports of Cardiff and Newport alone, the shipment of iron for the year 1851 was 550,000 tons!

When will our government take such a view of these facts as to stimulate it to measures calculated to produce a lasting benefit upon our own manufacturers, and advance one of the great leading interests of the people, and the wealth of the nation?

#### BEST WAY OF MAKING BUCKWHEAT CAKES.

—The season of buckwheat cakes brings with it many pleasant associations, hot, smoking, rich, and spongy, just from the griddle. The morning buckwheat breakfast-cake savors of health and real comfort. In order to give true zest, however, to this enjoyment, the good housewife should possess the secret of making them according to the best method, and we know of none better than the following: Take luke-warm water, and thicken it with flour to the consistency of cream; stir in about a gill of brewers' yeast, and let it stand in a warm place during the night. In the morning, add a table-spoonful of molasses, a spoonful of salt, a very little more flour, and a tea-spoonful of soda, dissolved in water, to a half gallon of bat-

ter. Let the griddle be made hot and well rubbed with lard, and the batter dropped in small quantities into it. The batter will spread from its own consistency into thin and delicate cakes; and if eaten immediately on being taken from the griddle, either with butter, molasses, or sugar-sauce, as may suit the taste, they make a dish which a prince might covet—wholesome, nutritious, and delicious. Try it.

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TWENTY-FIVE DOLLARS FOR A HOME-STEAD.—By reference to very many journals of the day, we observe that there is now a chance offered by which any person, although of very limited means, can secure a home for himself and family at a mere nominal price, and within a very short distance of New-York city. By the laws of this State, such a home is for ever exempt from the rapacity of ruthless creditors, and the poor man can there find an asylum from which nothing but the hand of death can dispossess him. As the division for the lots soon takes place, those interested would do well to make early application at the office, 208 Broadway, corner of Fulton street.

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AMERICAN LOCKS IN ENGLAND.—A company has just been formed in London, under the title of "Hobbs' Patent American Lock Company," for the purpose of manufacturing and bringing into public use in England Day and Newell's American Bank Lock.

The company is provisionally registered according to act of Parliament, and the capital proposed to be raised is fifty thousand pounds; in ten thousand shares, of five pounds each. A large portion of the amount is already subscribed. There are three trustees, and five directors. The trustees are Mr. Scholfield, of Birmingham, and Messrs. Kennard and Pickersgill, of London. Mr. A. C. Hobbs is appointed managing director. The locks will be manufactured immediately at Wolverhampton, and will be offered to the public, at prices varying from six shillings to fifty pounds each.

#### OUR CORRESPONDENCE.

FARMING IN ILLINOIS.—*Messrs. Editors:*—Eighteen years ago, I left my shop in Massachusetts, and moved to the wide prairies of Illinois, and have ever since been a practical farmer. Entirely ignorant of the art of farming at first, I commenced taking agricultural papers, and have endeavored to learn from others as well as by my own

experience. I am literally a working man, and not accustomed to writing, but will try to be useful in any way, and should be happy to benefit others, even in the smallest degree. I am a decided advocate of agricultural papers, and also of farmers giving the results of their experiments to the public. I have labored with a few en-



terprising farmers in this vicinity, for ten years, to start an agricultural society, and we have more than realized our most sanguine expectations. At our annual fair, we resolved to hold a convention of farmers at this place, for the purpose of establishing an agricultural college, or to have agricultural and mechanical departments in some of the colleges already established in the State. As the convention unanimously agreed that Professor J. B. Turner, of Jacksonville, should prepare for the press his address on that occasion, we raised money sufficient to print one thousand copies for circulation, and also to present petitions to the next Assembly for an act of incorporation, and also, if possible, to have appropriated three hundred thousand dollars of university funds, for the purpose of permanently founding an agricultural and mechanical institution worthy of the State. We refer to our State fund, the interest of which now goes to the common schools, but was originally set apart for college and seminary purposes.

The grain crop in this vicinity is quite light: the heavy rains in May and June very seriously affected the corn and the wheat crop. I think that thirty-five bushels of corn, and five to twelve of winter wheat to the acre, is a full average crop. Oats were fair, heavy in the straw, but light in kernel. Potatoes were quite light, and suffered from rot. After the rains ceased, and the weather became settled, the potato ceased to rot altogether, neither did the blight any further affect the apples. (Query, Is not the potato rot and apple blight caused by extremes of weathers?) I have noticed that the potato blight and apple blight (for I think them much alike) are more severe after heavy rains, accompanied by lightning, with the temperature of the atmosphere very changeable from the extremes of heat or cold. I believe the bug and fly have to bear the curse of being the cause with about as much fairness as do the poor Indians who commit depredations upon the whites in consequence of the whisky they have drunk, or through the influence of unprincipled traders.

I will send you hereafter some items in the hog-trade in this region.—RALPH WARE, *Granville, Illinois.*

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SLATE QUARRIES IN LEHIGH COUNTY, PA.—*Messrs. Editors:*—Herewith I forward to you a brief statement of the origin and progress of the slating business in Lehigh county. At the mouth of Fell's creek, ten miles north of Allentown, the bed of the Lehigh river presents a smooth and level surface, being a slate rock. The Lehigh Coal and Navigation Company found this a

favorable spot to build a dam for the purpose of forming a reservoir, in order to create artificial freshets for their (then) only descending navigation. A dam fourteen feet high was built, which soon became widely known, under the name of "Slate Dam." This soon attracted the attention of Mr. Thomas Symmington, an enterprising gentleman and experienced slater, of the city of Baltimore, who, in 1828, came to the Slate Dam in search of roofing-slates. He soon discovered, about one mile west of the Slate Dam, in North Whitehall township, near Fell's Creek, a place where, in his opinion, roofing slates could be quarried. He took a sample to Baltimore, which, after a fair trial, were pronounced good roofing-slate. Mr. Symmington soon after returned, leased a few acres of land, and thereon commenced quarrying roofing-slates. The same year, the Baltimore Slating Company was formed, with a capital of \$13,000. The Company purchased said estate, being one hundred and sixty acres of land, on which Mr. Symmington had his lease. Mr. Symmington then transferred his interest in said estate to the Company, and a large quarry, under the name of the Union Slate Quarry, was opened, and for a term of ten years worked by the Company, their slates being sent principally to Baltimore. After that time, the quarry was leased to different individuals, until 1849, when the said Company sold the property to Stephen Balliet, jr., and Stephen Graff, who still continue to work the quarry. About the years 1843-4, a slate quarry was opened in Heidelberg, now Washington township, which soon passed into the hands of Robert McDowell and others, under the name of the Heidelberg Slating Company. They now own the most extensive works in the county, and at present have four quarries in operation, and one large establishment for manufacturing school slates, which in 1851 turned out seventeen thousand dozen of these slates. In the immediate vicinity of these quarries, within the last few years, a flourishing village called Slatington has risen, having been founded by the Company. It is located fifteen miles north of Allentown, a quarter of a mile west of the Lehigh river. Messrs. E. Morris and Labar have three quarries in operation, and also a large factory for manufacturing school slates, which, in 1851, also made about seventeen thousand dozen slates. A flourishing village, called Labarsville, has within the last few years risen in the immediate vicinity of these quarries, distant four miles west of Slatington. In 1851, there were in Lehigh county eighteen or twenty quarries in operation, with a capital of \$54,500, which gave employment to two hundred and twenty-five hands, producing twelve thousand five hundred squares of roofing-slate, which, at

the low rate of \$3 per square, amounts to \$37,500. The two factories produce thirty-four thousand dozen school slates, which, at only 75c. per dozen, amount to \$25,500. The slating business in Lehigh county is yet in its infancy, but is destined ere long to be the most important branch of trade in the vicinity, as there is room for hundreds of quarries to be opened yet; and what better inducement can be offered to capitalists and others, than to embark in the slating business in Lehigh county? I boldly assert, that more wealth is hidden in hitherto undisturbed slate rock, lying within the townships of North Whitehall, Washington, Heidelberg, Lowhill, Weisenburg, and Lynn, in Lehigh county, than can be found in all the gold-dust of the far-famed California; and especially when the Delaware, Lehigh and Susquehanna Railroad is completed, which I learn will be put under contract early in the spring, as said railroad passes through the slating district, which, in addition to the Lehigh Canal, offers every desirable facility for transporting the slates to market. These slates have already found their way into New-Jersey, New-York, Maryland, Virginia, and South Carolina, and competent judges have pronounced them equal, if not superior to the best imported Welsh slates.—Edw. KOHLER, *North Whitehall, Lehigh Co., Pa.*

**CULTURE OF BLACKBERRIES.**—*Messrs. Editors.*—With your permission, I will take the liberty of offering your readers a few hints on the cultivation of blackberries.

The blackberry is of several species, and a native of this country, growing spontaneously, and often producing abundant crops of superior fruit. The best varieties in perfection are more wholesome and of a flavor richer than either the strawberry or the raspberry.

Among the many varieties or distinct species of this berry, most are inferior in size and flavor, which has made this fruit rather unpopular with you, coming in as it does when your market is supplied abundantly with other kinds of fruit. But in this cold climate, where we have the extremes of temperature, where peaches cannot be made to flourish, and pears are uncertain, I think this berry should be considered of much importance.

There are two varieties which I think superior to all others, the first of which is the "Bush," growing straight and upright, the top of which becomes recumbent and almost free from prickles, and under favorable circumstances attaining a height of from six to ten feet. It has a large white blossom in June, the fruit of a shining black, long, ovate, or about one inch in length, and one

in circumference, very tender, of a juicy and of a sweet, rich flavor. This variety is seldom found.

The second is the "High Bush." This is a very rapid-growing blackberry, stem very tall, sometimes ten or twelve feet in height; fruit shining black, very large, oval, conical, often over an inch in diameter, very sweet, juicy, and melting, with an aromatic flavor; the fruit ripening from the first of August until the middle of September.

This fruit in perfection is not excelled by the productions of any climate. It is delicious for the dessert, excellent for pies, puddings, sauce, preserves, wine, &c., and it well supplies the place of the peach and grape.

This most wholesome of all fruits often relieves bilious and dyspeptic habits, and dysentery has often been cured by a free use of the ripe fruit. I have every reason to believe a free use of it by all classes, instead of *unripe fruit* and *flesh-meat*, would do more to lessen mortality at that season than all the "Dysentery Cordials," "Anti-cholera" drugs, that all the speculative ingenuity of men ever invented.

**Soil and Cultivation.**—The blackberry grows freely in a warm, tolerably dry, or rather deep rich soil; it abounds among stones, old logs, natural ledges, and on lands which have recently been burned over, which contain a good supply of alkali.

Land should be kept rich, mellow, and free from grass and weeds. Besides common manure, use leaves, ashes, and vegetable matter.

It is propagated by seeds and offsets from the root.

I would recommend to those who wish to cultivate this fruit, first, to select a suitable spot of ground; second, plough deep and well; third, have your hills from six to eight feet apart, for the convenience of ploughing and cultivation. The land once "set," they will not need transplanting for a long time.

After this, manuring, ploughing, and keeping the bushes properly thinned, is nearly all that is necessary to secure large and abundant crops of the choicest fruit.

One bush often produces a quart of the finest; a friend of mine has a bunch covering less than one rod of land, and he assured me he picked *twenty-seven quarts in one day*. I saw a spot this season which produced over one bushel to the rod, or more than five thousand quarts per acre. A few such acres of blackberries near Boston or New-York would be a fortune to the owner.

I am so very confident that great results must attend the cultivation of this fruit, that I intend putting one acre under cultivation this spring, and will endeavor to let you know the result, both by statements

and samples of fruit.—LEWIS H. SPEAR, *Braintree, Vt.*

[We shall be happy to hear the result of our correspondent's experiment, and, from our own knowledge of this fruit, have full confidence in his success. We would advise our agricultural readers generally, to give attention to the cultivation of the best varieties of the blackberry; and in regard to its productiveness, if properly cultivated, we believe all will be surprised at the result. A friend of ours, from experience, estimates *one hundred bushels* to the acre as less than an average crop.—EDITORS.]

THE POTATO ROT.—*Messrs. Editors:*—Much has recently been said in regard to the potato and its diseases. Various opinions as to the cause of the rot have been given. Some say the potato has degenerated; others think it is a bug, a fly, or a worm; but I have come to the conclusion that our warm, wet falls, more than any thing else, have caused this disease. In this State, last fall, the weather was cool and dry, except a few days about the first of September, which were very warm. We had a fair yield of as good, ripe, mealy potatoes, as we used to have before the potato disease was heard of. I know farmers who practise planting on cool, dry land and have had very fair crops, when those of their neighbors were spoiled. Those who have not practised planting on cool, dry soil, will do well to try it, and I doubt not they will find it to be of greater value than all the preparations that will be invented in consequence of the \$10,000 premium offered by the Legislature of Massachusetts. Last fall having been cool and dry, enabled us to supply Massachusetts with this esculent; and I think, if our farmers are wise enough to select the right soil, they will be able to do the same for years to come. Even though the falls should prove warm and rainy, we have enough of the right kind of soil on our mountains, if properly managed, to supply all New-England, and also New-York, with potatoes.—L. H. SPEAR. *Braintree, Vt., January 1, 1852.*

THE CROPS IN MINNESOTA.—In my last, I promised you a further communication when I should be able to speak with cer-

tainty as to the amount of crops and current prices in the Territory. We are now settled down for the winter; the farmers are busy hauling their produce to market, and prices have become settled. For cash, these are steady and uniform, but for trade or store pay, there is considerable advance, amounting, in most cases, to 25 or 30 per cent.

Messrs. Furber, on land eight years under the plough, have raised spring wheat, of the Black Sea variety, yielding 25 bushels per acre; and on the same land, 50 bushels per acre of oats, weighing 42 pounds to the measured bushel. No manure or dressing of any kind has been put on this land.

Mr. Scofield has raised 40 bushels to the acre of spring wheat, on land not so long in use, and his wheat gave 42 pounds of good flour to the bushel.

Mr. J. W. Selby, on new prairie land, raised corn of two varieties; the yellow flint, such as is raised in New-York, gave him 60 bushels to the acre; and the white flint, commonly raised in this country, 80 bushels.

Mr. H. M. Rice, on his farm near St. Paul, put in a crop of large Southern dust corn, which ripened perfectly, and was estimated by many competent farmers at 100 bushels to the acre. The above corn was on the native soil, without manure, and without any extraordinary care in cultivation.

Mr. Bailly, of Wabershaw, reports to me that his winter wheat has turned out 40 bushels per acre. The sample he produces is as fine as any wheat I have ever seen.

The past has been an unusually wet season, and not near so favorable for corn as we usually have in this climate; notwithstanding which, the grain crops have all been very productive, and our farmers make no complaints, except as to potatoes, which still suffer from disease.

The cash prices at St. Paul's stand as below:

Wheat, 75c.; Corn, 50c.; Oats, 30c.; Potatoes, 75c.; Ruta baga, 12½c.; Beets, \$1; Onions, 75c.; Buckwheat flour, 3½cts. per pound; Beef, 5a6c. by the carcase; Fresh Pork, 8a9c. the hog round; Mess Pork, \$18; Prime Pork, \$15.50; Venison, 10a12c.—P. PRESCOTT. *St. Peters, Min., Jan. 15, 1852.*

## TOPICS OF THE PRESS.

POTATOES GROWN IN TAN.—William Sutton, of Salem, Massachusetts, writes to the *Journal of Agriculture* the following facts, relating to an experiment in the cultivation of potatoes:

Had I anticipated any thing like the re-

sult that followed, he says, I should have noted the facts with more particularity.

In 1850, the ground was planted with corn and potatoes. Part of the potatoes rotted. This year it was laid out into squares, fourteen paces each way. A



small coating of barn manure was spread after ploughing, and harrowed in.

*Lot No. 1.*—The potatoes were covered with salt hay, about six inches thick, over the whole square. Yielded four bushels.

*Lot No. 2.*—The potatoes were covered with slacked lime, then covered with soil, then spread half a bushel of salt over the square. Yielded four bushels.

*Lot No. 3.*—The potatoes were covered with soil, then a coating of lime on top. Yielded four and a quarter bushels.

*Lot No. 4.*—The potatoes were placed in the hills on the lime, and then covered with soil. Yielded four and a quarter bushels.

*Lot No. 5.*—First put a shovelful of tan in the hill, then the potatoes on the tan, and covered with soil. Yielded four and three quarter bushels.

*Lot No. 6.*—Put a shovelful of barn manure from the stall where my oxen were kept, and covered with soil. Yielded four bushels—the poorest lot in the field.

*Lot No. 7.*—Dropped the potatoes, and threw a shovelful of tan upon them, and then covered with soil. Yielded four and a half bushels.

*Lot No. 8.*—Dropped the potatoes, and threw a shovelful of meadow mud upon them, and then covered with soil. Yielded four bushels.

*Lot No. 9.*—The same as No. 8, with the potatoes dropped on the mud. Yielded four bushels.

The potatoes in Nos. 5 and 7 were up a week before the others.

In most of the parcels, except where the tan was used, there were found more or less defective potatoes. Those that grew in tan were larger, smoother, and of better quality than the others. I have grown no better potatoes than these this season. I am so well pleased with the operation of the tan, that I shall try it more extensively another season, and with other crops. I used several kinds of potatoes. The quantity of seed in each hill was nearly the same; the manner of hoeing and treatment the same throughout. I am sorry not to be able to state the facts with more precision. But if any one shall be induced to imitate my example, I hope they will be instructed by the experiment. I certainly have been.

**STOP HIS KICKING.**—It is not an uncommon thing to meet with horses which will kick while in harness. Such horses are dangerous to drive, and the habit diminishes their value very much. The *Ohio Cultivator* publishes a communication from Jonathan Coe, of Dalton, Ohio, giving the following simple method of preventing the practice of this pernicious trick. Take a

forked stick, about two feet long, varying a little, according to the size of the horse; tie the ends of the fork firmly to each end of the bridle bit, and the other end of the stick to the lower end of the collar, so as to keep the head up, and this will prevent his kicking. A few days' working in this manner will commonly effect a cure. Horses, he says, are more apt to kick when turning in, ploughing, or harrowing, than when doing any other work.

#### THE IRON TRADE IN GREAT BRITAIN.—

This great staple trade of our district, says the *Birmingham Gazette*, has retained hitherto an unchanged aspect of dulness and depression. If any alteration can be noticed, it has been a further tendency to decline rather than to improvement; and the trifling transactions of the last fortnight appear, in several instances, to have been concluded upon somewhat lower terms. It would be difficult, however, to define any actual limit of variation in the prices of iron either at the present moment or during the last six months; but while first makes are commanding something near the nominal figures, it is not going too far to say that others are now to be had at 15s. per ton lower. Among the purchasers of pig-iron a strong disinclination is shown to forestal the requirements of the approaching quarter; while holders of materials are every where endeavoring to press forward their sales. From the Scotch market accounts are gloomy, reporting 3d. per ton decline. The unusually short supply of water in the various canals is also inflicting a serious injury, increasing the expense of transit both upon iron itself and the materials for its manufacture. Notwithstanding these adverse symptoms, it is still generally expected that there will be no declaration of reduction at the approaching quarterly meeting, but that existing prices will be maintained at Christmas; and some go so far as to entertain a hope of acquiring a more satisfactory position early in the spring. Among other reasons for such an opinion, it is stated that the first-rate works are tolerably well supplied with orders, and maintain their quotations with firmness; that no accumulation of stocks, either in wrought or unwrought iron, has taken place during the last twelve months of depression; that the principal evil felt is rather the impossibility of obtaining remuneration than an absolute scarcity of demand; and that, while it is impossible that the home consumption should suffer further, the commencement of the spring trade will bring an additional accession to the continually increasing amount of export demand sufficient to warrant higher

pretensions. Of the correctness of such views, those who are interested must, however, form their own judgment.

WASH.—Heavy rains, says Caleb Cotter in the *Maine Farmer*, wash from hilly lands some of their best parts. It is the best, because it is the finest portion—nearest to that state when it is suitable for the food of plants.

Some have adopted the plan of ploughing only the higher parts of the hill-side. The wash that comes from the ploughed land is then caught in the grass below, keeping the soil continually rich. There is another mode of saving the wash which can be practised to advantage in many places, which is simply this: Dig a hole in the bottom of the drain through which the wash will be carried, of a size to suit circumstances, and, if properly constructed, it will be filled with wash, which can be carted away to do good.

These sediment holes should be made where the water runs slowly, for the wash has more time to settle; and the side from which the water runs off should be as high as that from which it runs on, otherwise a fall will be made which will not allow the wash to settle.

The wash of the drains of buildings can be saved in the same manner, where expenses cannot be spared to save in a better way this valuable fertilizer. Charcoal, plaster, burnt muck, or some other deodorizer, should be thrown in occasionally, to fix the valuable, yet unwholesome and unpleasant gases.

STEAM STONE-CUTTING.—There is, at the foot of Twenty-eighth street, East River, one of the most extensive stone-cutting establishments in the city. It is the establishment of the Empire Stone-dressing Company, and is described in the *New-York Sun* as occupying about five acres of ground, and employing a steam-engine of one hundred horse-power. Huge blocks of stone are lifted, by steam, from the vessels at the dock, and placed upon a railroad track extending to the main building, and conveyed by means of a truck to the remarkable machine. The adjustment of the cutters is but the work of an instant, and then, by the push of a lever, the stone chips begin to fly like shavings from a board. One of these machines can do more work in ten minutes than a man can do in a whole day by hand. Our mechanical readers can form an idea of the appearance of the steam stone-cutting machine when we tell them that it closely

resembles Daniels' board-planing machine, the cutters of which are placed at the extremity of horizontal arms, and with them revolve, cutting the wood as it passes slowly along below. The cutters of the stone machine are, however, entirely different from any others. They consist of small, thin, steel wheels, sharpened to an edge, so that, while passing over the stone, they revolve, but at the same time cut. It is in this peculiar formation of the cutters that the value of Wilson's patent consists. This rolling cutter produces no jarring of the stone, though the power applied to drive it is of course tremendous. The rapidity with which the stones for the fronts of buildings, columns, door-steps, &c., are dressed off by these machines, is truly astonishing. The steam rubbers, which give the finishing touches, are simple, but very effective. The carving and moulding is not done by machinery, only by hand. The brown stone for the new Court House in the Park, and many other buildings, is being done at the Empire Works. All the tools and repairs required in the establishment are made in the concern. Among other curiosities in the blacksmith's shop, is a forge made of wood, lined with fire-brick, and so arranged that three men have access to the fire at the same time, without troubling each other at all. The buildings are heated by the exhausted steam.

TO PREVENT THE CROUP.—A medical correspondent of the *Mirror*, in an article on this disease, says: "The premonitory symptom of croup is a shrill, sonorous cough. The patient is not sick; has no fever, as often in a common cold; is lively, perhaps even gayer than usual; his hands are cool, his face not flush, possibly a shade paler than usual. The solitary symptom may last a few days with no material increase or abatement, and without attracting any notice; suddenly, however, the disease, hitherto latent, bursts forth in all its fatal fury, and too often continues its ravages, unchecked, to the dreadful consummation. The remedies for this symptom of croup are simple, and in most instances perfectly efficient. They are: a mustard poultice, or a strip of flannel dipped in oil of turpentine or spirits of hartshorn, applied to the throat, and nauseating doses of Hive's syrup to be continued as long as the cough remains. By this timely employment of mild agents, I unhesitatingly assert that a multitude of lives might be saved every week, that are now lost through negligence and delay."

## EDITORIAL AND SELECTED MISCELLANY.

THERE is a knitting machine in Philadelphia which knits three hundred and eighty stitches at each turn of a small crank, which crank may be easily turned by hand from one hundred to one hundred and fifty revolutions per minute, making from forty to sixty thousand stitches per minute, or at the rate of about three millions per hour. . . . In the neighborhood of Zanesville, Ohio, the cold has been so severe that the fruit buds of the peach trees have been destroyed, and there is but little hope of peaches the next season. . . . THERE are fourteen editors in the Massachusetts Legislature, and six printers in the Pennsylvania Senate. . . . PRAYING *frequently* helps to praying *fervently*. Be assured, it is better to wander *in* prayer than to wander *from* it. . . . THURLOW WEED, now in Paris, has found a painting of the Genessee Falls, N. Y., executed in 1798 by a brother of Louis Phillippe, while he and the King were traveling through that State. . . . THE better animals can be fed, and the more comfortable they can be kept, the more profitable they are. . . . FROST takes effect more readily on roots that have been dug up, than those which are left in the ground; therefore, either give your store roots complete protection, or let them remain well covered in the ground. . . . A STRONG horse will work all day without food, but keep him at it and he will not last long. . . . THE first drawn milk contains only 5, the second 8, and the fifth 17 per cent. of cream. . . . THE tobacco crop of Missouri for 1851 is estimated at from 14,000 to 15,000 hhds., against 12,000 to 13,000 in that of the preceding year. . . . WHEN you retire to bed, think over what you have been doing during the day. . . . GOV. JOHNSON has been elected President of the Alleghany Railroad. . . . WHEREVER you see persecution, there is more than a probability that truth lies on the persecuted side. . . . A BILL has been reported in the Legislature of Indiana, and will probably become a law, providing for an annual appropriation to remove free negroes from the State to Liberia. . . . THERE is this paradox in pride: it makes some men ridiculous, but prevents others from becoming so. . . . THE Maine Liquor Law, which had passed the popular body of the Rhode Island Legislature, was lost in the Senate: Yeas, 11—Nays, 20. . . . A BARE pasture enriches not the soil, nor fattens the animals, nor increases the wealth of the owner. . . . THE Land Reformers and Industrials generally, assembled at Military Hall, New-York, on Feb. 18, it being their Fourth Annual Banquet, forming one of the largest and happiest social gatherings of the season. . . . THEY who drink away their estate, drink the tears of their widows, and the very blood of their impoverished children. . . . AT Tallahassee, Fla., lately, ice formed to the depth of three-eighths of an inch, and the fish were so chilled as to be unable to navigate. The vegetables were all frozen. . . . A MAN caught in a railroad collision, remarked that presence of mind might be good, but absence of body was better. . . . It is easy to wish for heaven, but difficult to get a heavenly mind. . . . THREE men were frozen to death in the vicinity of New-Orleans, during the recent cold weather. . . . THE pleasure of doing good is the only one that does not wear out. . . . A YOUNG Irish student, at a veterinary college, being asked, if a broken winded horse should be brought to him for cure, what he would advise, promptly replied: "To sell him as quick as possible." . . . THE amount of Kossuth's bill at Brown's Hotel, Washington, (\$3,500,) has been paid out of "contingent funds," appropriated by Congress for miscellaneous purposes. . . . THE inhabitants of New-York, it is estimated, spend \$20,000 a day upon their public amusements. . . . MORTIMER LIVINGSTON, F. W. Edmonds, Auguste Belmont, Watts Sherman, and Alfred Pell, have been appointed trustees to obtain subscriptions to the amount of \$200,000, for the purpose of erecting a building for the World's Fair to be held in New-York. . . . Cows well fed in winter give more milk in summer. An ox that is in good condition in the



spring will perform more labor, and stand the heat of summer better, than one that is poor. . . . MR. CHARLES L. BRACE is preparing for publication the narrative of his travels and adventures in Hungary in the year 1851, with his observations upon the political organization and state of the country. . . . A WHOLE family was destroyed in St. Louis, Mo., on the night of the 31st Jan., by the unconscious inhalation of gas while asleep. . . . BOUNTIFUL crops are more profitable than poor ones. Make the soil rich, pulverize it well, and keep it clean, and it will generally be productive. . . . In Genoa, out of a population of 120,000, there are 14,000 monks, friars, nuns, and ecclesiastics of various kinds. . . . MESSRS. JAMES G. KING & SONS paid, a few days ago, \$250,000 on account of the purchase by English capitalists of the Mariposa estate of Col. Fremont. . . . MEN of a lively turn and generous hearts should be born to fortunes; gain them they seldom will. . . . THE dry goods merchants of Baltimore state that one-third of their business operations during the past year has been conducted by means of the telegraph. . . . THE Pennsylvania Legislature has before it the report of a bill from a Committee on Banks of the Senate, to allow issues of one, two, and three dollar bills. . . . THE number of chests of opium, each containing 133 lbs., taken to China within the year, is stated at 70,000, in exchange for which the Celestials paid \$36,000,000, mostly in silver. . . . FARMER'S sons had better learn to hold the plough and feed the pigs, than to measure tape and count buttons. . . . THOSE who have gardens or small allotments of land are strongly advised to cultivate parsnips, which are much superior to carrots, both for the table and for the feeding of pigs and other animals. . . . MISS CAROLINE CHESEBRO will shortly present the public with a new novel, of which we hear the best possible report from those who have been favored with a sight of the proof-sheets. . . . FORTY-ONE thousand emigrants landed in Canada during the year 1851. . . . MINNESOTA is about four times the extent of Ohio, and reaches 675 miles from south-east to north-west, and lies between north latitude  $42^{\circ} 30'$  and  $50^{\circ}$ . . . . MR. B. H. KINNEY, of Burlington, Vt., has just executed a statue to the memory of Ethan Allen, and claims that it is the first statue ever sculptured in that State, and, he believes, the largest in America. . . . WHAT ought to be done to-day, do it, for to-morrow it may rain. . . . MR. R. H. STODDARD is about to publish a volume of Fairy Stories, for the special benefit of the little folks. . . . THE entire yield of California in 1851 is estimated at \$75,000,000. . . . It is stated, that among the millions of farmers in the United States, there is not one Jew. . . . SEVENTY years ago, it cost five dollars to have a pound of cotton spun into yarn; it now costs thirty cents. . . . AN old lady who visited the celebrated statue of Powers' Greek Slave, a day or two since, exclaimed to her daughter, as her eye rested on the snowy marble: "La, Jemima, it ain't a nigger after all!" . . . On the 30th of January, upwards of 310,000 bales of cotton were shipped at Mobile for Liverpool. . . . THE Rev. Dr. Nott, brother of President Nott, of Union College, celebrated at Franklin, Conn., on the 21st ult., the ninety-eighth anniversary of his birth. . . . To preserve books from insects, introduce into every volume some leaves of a pungent odor, such as rosemary, or submit them to the vapor of oil of turpentine. . . . THE profits of the Penitentiary of Louisiana, during the year 1851, were \$12,639 67. . . . Two of the sons of the late Rev. Archibald Alexander, D.D., are now preparing a memoir of their venerated parent. . . . PUMPKINS, squashes, &c., may be kept through the winter in any dry room to which frost has no access. . . . ALL who wish to be rich must spend less than they earn. . . . GROUND once well ploughed is better than thrice poorly. . . . THE city of Portland, Maine, is a city of 20,000 inhabitants, and yet, during the month of November last, not a single row occurred in its streets, nor a single person was committed to the watch-house. . . . THE House of New-Jersey has passed an act admitting Virginia Stocks among the Securities to be given for circulation by the Free Banks of that State. . . . THE social feelings have not been inaptly compared to a

dark heap of embers, which, when separated, soon languish, darken, and expire; but placed together, they glow with a ruddy and intense heat. . . . In the United States, it is estimated that there are 16,682 preachers of the various Christian denominations. . . . LEEKS, beans, garlic, asparagus, sea-kale, artichoke, and others of this description, may be preserved by means of vinegar or salt and water—say 4 lbs. of salt to a gallon. . . . THE Lafayette Bank of Cincinnati is calling in its loans, preparatory to winding up its business. . . . On the 10th of Feb., the Board of Aldermen of Louisville again decided not to invite Kossuth to their city. . . . A RICH soil will produce good crops without manure, but will soon tire. . . . In Carter county, Ky., there is a natural bridge across the Rockbridge branch of the Cany Fork of Little Sandy. It is 195 feet span, 12 feet wide, 20 feet thick in the middle of the arch, and 107 feet above the water. . . . GOLD is the god, the wife, the friend, and the money-monger of the world. . . . THE New-York correspondent of the *Philadelphia Ledger* says, that Dr. Spring's church will probably be leased by the Government for the new Post-Office. . . . THERE is a project on foot for a railway along the west shore of Lake Michigan, and books have been opened for subscription. . . . THE court of appeals in Kentucky have decided, in a case involving the right to tax the citizens for railway subscriptions, that the tax is constitutional and obligatory. . . . YOUNG ladies who have the good fortune to become farmer's wives will find it more profitable to know how to make Johnny cake and cheese, than to play on the piano. . . . Out of all the subscribers to the *Spirit of the Times* last year, only seven had to be dunned—five of whom were dead, and the money of the other two had been stolen from the Post-office. . . . THE following simple remedy for scarlet fever is published:—"Take of good clean fat bacon a sufficient quantity, and rub with it the skin of the patient." . . . MORE persons fall out concerning the right road to heaven than ever get to the end of their journey. . . . GUY FAWKES' cellar, which lay below the temporary house of Parliament, has been completely demolished. . . . MR. G. R. McFARLOW, of Holidaysburgh, has given Kossuth a ton of cannon balls! . . . THE gates of Constantinople, which were made of cypress, stood entire from the time of Constantine, their founder, to that of Pope Eugene IV., a period of 1,100 years. . . . THE Society of Friends separated in New-York in 1828. The Hicksites, at their last meeting, agreed to pay over to the other division \$25,000, or one half the estimated value of the property at the time of the separation. . . . YOUNG ladies educated to despise mankind, generally finish their studies by running away with the footman. . . . FROM recent statistics, it appears that there are in the United States 25,000 lawyers. The State of New-York alone is said to have 4,740. . . . THE Legislature of Wisconsin have adopted a resolution welcoming Kossuth to the country. . . . A QUIET mind, like other blessings, is more easily lost than gained. . . . THE Lunatic Asylum at the city of Lexington, Ky., was destroyed recently by fire. . . . In the State of New-Jersey there are 1,612 school districts, where children are instructed on an average nine months in a year. . . . At Cleveland, nine ladies are studying the Homœopathic system of medicine. . . . RESORT to sermons, but to prayers most; prayer is the end of preaching. . . . THE population of Oregon is estimated at 20,000. It would be considerably larger if the Indians were counted. . . . THE total number of newspaper stamps issued in the year 1850, in England and Wales, was, of penny stamps, 65,741,271; and of halfpenny, 11,684,423. . . . MISS ALICE CAREY has in press a new volume of ballads and other poems, written during the last two years. . . . It is often extremely difficult in the mixed things of this world to act truly and kindly too; but therein lies one of the great trials of man; that his sincerity should have kindness in it, and his kindness truth. . . . The State of Wisconsin, which is but four years old, has a school fund of \$764,109. . . . On the 9th ult., a gold medal, of beautiful design and workmanship, was presented to Henry Clay, at Washington, by a committee of his friends

from New-York. . . . THERE are \$385,500 capital absorbed in plank roads leading to the city of Detroit. The length of these roads in less than a year will exceed 250 miles. . . . It is estimated that one thousand German emigrants have settled at Cincinnati within the last sixty days. . . . NOTHING elevates us so much as the presence of a spirit familiar yet superior to our own. . . . THE Legislature of Rhode Island have passed a bill abolishing capital punishment in that State. . . . A DAIRY-MAN was awoke by a wag at midnight, with the announcement that his best cow was choking. He forthwith jumped up to save the life of Brumme, when, lo! he found a turnip stuck in the mouth of the pump. . . . THE ear of a friend is the sanctuary of evil reports; there alone they are safely preserved. . . . JOSIAH QUINCY, sen., though past the age of fourscore, is said to be arranging a municipal history of Boston, with whose fame his public career is closely associated, and over whose government he was placed for six successive years. . . . SMALL and steady gains give competency, with tranquillity of mind. . . . WEEDS that grow unmolested around the fences, stumps, and stones, scatter their seeds over the farm, and are very likely to grow. . . . SPINACH may be kept through the winter in the bed in which it has been grown; it will only be necessary to cover it slightly with straw. . . . NATIONS in a state of war are like individuals in a state of intoxication; they frequently contract debts when drunk, which they are obliged to pay when sober. . . . MEN with few faults are the least anxious to discover those of others. . . . THE shortest and surest way to live with honor in the world, is to be in reality what we would appear to be. . . . HE that accustoms himself to buy superfluities, may, ere long, be obliged to sell his necessities. . . . NEVER be idle. If your hands cannot be usefully employed, attend to the cultivation of your mind. . . . Good company and good conversation are the very sinews of virtue. . . . STRONG passions work wonders when there is stronger reason to curb them. . . . If any one speaks evil of you, let your life be so that none will believe him. . . . KEEP good company or none. . . . WHEN you see the fence down, put it up; if it remains until to-morrow, the cattle may get over. . . . THE *New-Orleans Bulletin* states, that on the reception of the President's Message in that city, one of their fast compositors set up four thousand ems in two hours ten minutes; a feat, it says, which cannot be beat any where. . . . THE *Philadelphia Ledger* says it is generally conceded that the opening of spring trade in that city will be followed with unusual buoyancy and a general rise of prices. . . . A CHINAMAN of San Francisco says there are about three thousand five hundred Chinese in California. . . . THE *Journal* announces the death, in Missouri, of Hon. P. S. Loughborough, one of the brightest ornaments of the Louisville (Ky.) Bar. . . . THE Governor's salary in Tennessee has been increased by the Legislature from \$2,000 to \$3,000. . . . Five citizens have recently died in Albany, whose united ages amount to 436 years. The eldest was 95, and the youngest 82 years old. . . . SEVERAL merchants at San Francisco have recently subscribed \$1,000 to the Washington National Monument. . . . THE Graduates of Amherst College, of the class of 1832, will hold a "vigintal" festival, August 11, the day preceding Commencement. . . . It is calculated that flax-cotton, prepared by Claussen's method, can be furnished to the manufacturer at six cents per pound, and leave ample margin for profits to those who produce the flax and prepare it. . . . A BILL to prohibit colored mechanics or masons, being slaves, or free persons of color, being mechanics or masons, from making contracts for the erection of buildings, &c., has been introduced by Mr. Woolsey into the lower house of the Alabama Legislature. . . . NINETY persons were killed and forty wounded by railway accidents in the State of New-York during the past year. Not one was killed in his seat. . . . TALKING about women voting, the *Burlington Sentinel* says: Cradles are the ballot boxes for women, in which they should deposit, not votes, but voters. That makes a Warwick of every mother of 'em.